

*EDUCATION AND
PROFESSIONAL EMPLOYMENT
IN THE U.S.S.R.*

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Foreword

THE CONTINUING study and assessment of the capabilities of other nations in science and technology play an indispensable part in the formulation of our own national policies. The decisive role of education in the development of the professional manpower potential, particularly in science and engineering, and the responsibility of education for the recent large-scale Soviet technological advances are universally recognized.

Since publication by the National Science Foundation of *Soviet Professional Manpower* in 1955, the dynamic growth of Soviet scientific and engineering manpower has markedly accelerated, and there are currently indications that the Soviet Union intends to place even stronger emphasis upon engineering development and scientific research. These developments call for a continuing reappraisal of conditions in the Soviet Union and the provision of up-to-date information. It is hoped that the publication of the present volume will fill this need.

The present study was sponsored by the Foundation and prepared by the author under the auspices of the Office of Scientific Personnel, National Academy of Sciences—National Research Council, under the direction of Dr. M. H. Trytten. The research was conducted primarily at the Russian Research Center, Harvard University, drawing upon the rich resources of Soviet publications and other sources of information there as well as the helpful advice of staff.

Mr. Nicholas DeWitt, internationally recognized authority on Soviet education and professional manpower resources, has written widely on Soviet affairs. He was educated in Europe and Russia itself, later continuing his undergraduate and graduate studies at Harvard. He has been associated with the Russian Research Center for the last eleven years. Mr. DeWitt has lectured in a number of American universities and has also been engaged as a researcher and consultant for several institutions, including the Massachusetts Institute of Technology, the University of North Carolina, the National Bureau of Economic Research, the Battelle Memorial Institute, the Council for Economic and Industrial Research, and United States governmental agencies.

The new study is not merely a revision of *Soviet Professional Manpower* but constitutes an entirely new research effort, drawing upon the increased flow of Soviet official data as well as Western reports, accounts of visitors to the Soviet Union, and various other sources of information. As indicated in the author's preface, a preliminary draft of this report was circulated to a panel of Government and academic experts in the field of Soviet studies and education for review and comment. The present study has therefore had the benefit of available authoritative criticism.

In addition to a presentation of factual information this volume attempts a comprehensive and scholarly assessment of the Soviet educational system and professional manpower potential as it has developed in the past and as it is now emerging in the course of the current educational reforms in the U.S.S.R.

ALAN T. WATERMAN,

Director, National Science Foundation

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Source Abbreviations Used in the Text

Because of the frequency of citation, it was found convenient to abbreviate some of the source titles throughout this volume. For full titles, the reader is referred to the cross-references in the bibliography. A list of the sources which were abbreviated follows:

<i>APS-NarObr—1957</i>	<i>NarKhoz—1932</i>	<i>SotsStroi—1936</i>
<i>ASEE</i>	<i>NarKhoz—1959</i>	<i>Source X</i>
<i>Bartosek, Vysoké</i>	<i>NarKhoz—1960</i>	<i>Source Y</i>
<i>Beilin, Kadry</i>	<i>NarKhoz-RSFSR—1959</i>	<i>Source Z</i>
<i>BSE-1st</i>	<i>NarKhoz—SBX</i>	<i>SPM</i>
<i>BSE-2d</i>	<i>NarObr RR—1943</i>	<i>Sprav SSU</i>
<i>BSE-SSSR—1948</i>	<i>NarObr RR—1944</i>	<i>Sprav VUZ (with appropriate year)</i>
<i>BSE-SSSR—1957</i>	<i>NKh—1956</i>	<i>SSO</i>
<i>BSE-YB—1957</i>	<i>NKh—1957</i>	<i>SSSR-Tsif—1958</i>
<i>BSE-YB—1958</i>	<i>NKh-RSFSR—1957</i>	<i>SSSR-Tsif—1959</i>
<i>Deineko, Spravochnik</i>	<i>OE-USSR</i>	<i>SSSR-Tsif—1960</i>
<i>Direktivny-SBX—1957</i>	<i>Plan kadrov—1930</i>	<i>Tretii FYP</i>
<i>Dos—1957</i>	<i>Plan Khoz</i>	<i>Trud—1935</i>
<i>Eliutin-VSSS—1959</i>	<i>Plan 1935</i>	<i>Trud—1936</i>
<i>Galkin, Nau Kadry</i>	<i>Plan 1936</i>	<i>VAN</i>
<i>Gorokhoff, Materials</i>	<i>Plan 1937</i>	<i>Voznesenskii, Voennaia</i>
<i>Itogi pervogo FYP</i>	<i>Plan 1941</i>	<i>Vtoroi FYP</i>
<i>KS—1956</i>	<i>Podgotovka</i>	<i>VVSh</i>
<i>KS-RSFSR—1958</i>	<i>SC-Eng—1936</i>	<i>VyShkoSPR—1945</i>
<i>Kul't Stroi—1934</i>	<i>Shtyl'ko, Pod'em</i>	<i>VyShkoSPR—1948</i>
<i>Kul't Stroi—1935</i>	<i>Sinetskii, PP Kadry</i>	<i>VyShkoSPR—1957</i>
<i>Kul't Stroi—1940</i>	<i>SotsStroi—1933-38</i>	<i>Zhenshchina</i>
<i>Medynskii—1947</i>	<i>SotsStroi—1934</i>	<i>Zhirnov, Kul'turnoe</i>
<i>Medynskii—1952</i>	<i>SotsStroi—1935</i>	
<i>Medynskii—1955</i>		

for the training of specialists with completed higher education and planning of the proper location of higher educational establishments in conjunction with the future development of the national economy, culture and education should be improved.

(b) Work places and technical positions should be reserved in enterprises and offices for higher education students, who undertake industrial practice or who study without leave from active employment.

(c) There should be an expansion of the material and technical base of higher educational establishments and construction of new study and laboratory facilities, especially in the eastern [Asiatic] regions of the republic. The construction of dormitory facilities is to be expanded to the complete satisfaction of the need for accommodation of all out-of-town students. Manufacturing facilities are to be established for making all essential laboratory and teaching equipment, visual aids, experimental facilities and equipment required by higher educational establishments.

(d) Higher educational establishments with a single profile [i.e., specialty group] located in the same city should be merged. Furthermore, some research institutions are to be merged with higher educational establishments.

(e) Agricultural higher educational establishments are to be provided with land in accordance with the established regulations.

Article 52: Other republics

U.S.S.R.—The following clauses are different in the U.S.S.R. law: (1) adds that special publishing offices and printing facilities should be established to service higher educational establishments; (2) adds that additional benefits should be granted to students in the upper courses of higher educational establishments and technicians who study while employed; (3) omits the statement about creating production facilities at higher educational establishments.

Ukraine—Identical with U.S.S.R.

Armenia—Identical with RSFSR.

Latvia—Omits Paragraphs (a), (b), (d), and (e) of RSFSR law. Omits the statement about the need for the creation of a production base. Adds the statement about textbooks and teaching aids. Adds clause (2) of the U.S.S.R. law, but refers only to higher educational establishments and not to technicians.

Lithuania—Paragraphs (b), (d), and (e) of RSFSR law omitted. Omits also statement about the need to create a production base. Adds a statement that the "existing excessive parallelism" in the preparation of specialists with higher education should be eliminated. Adds clause (1) of the U.S.S.R. law.

Moldavia—Omits Paragraphs (b), (d) and (e) of RSFSR law. Omits the statement about the need to create a production base. Adds the clause about the need for the improvement of public food catering and the clause about the need for an abundant supply of texts and study aids.

Tadzhikistan—Omits Paragraphs (a) and (e) of the RSFSR law. Omits the statement about the need to create a production base. Adds clause about the need to improve food catering as well as clause (1) of the U.S.S.R. law.

Turkmenia—Omits Paragraphs (b), (d) and (e) of the RSFSR law. Omits the statement about the need for the creation of a production base.

Uzbekistan—Omits Paragraph (e) of the RSFSR law and the statement about the need to create a production base. Adds clause (1) of the U.S.S.R. law.

Azerbaijan—Nothing about dormitories. Omits Para-

graphs (d) and (e) of RSFSR law. Adds clause (1) of the U.S.S.R. law.

Belorussia—Omits Paragraph (e) of the RSFSR law. Adds clause (1) of the U.S.S.R. law and adds the statement that public food catering should be improved.

Estonia—Omits Paragraphs (b), (d) and (e) of RSFSR law. Omits the statement about the construction of dormitory facilities. Omits statement that there should be production facilities created at higher educational establishments. Adds that there should be enough texts and study aids both in Estonian and Russian available to students in higher education, particularly for those studying without leaving active employment.

Georgia—Omits Paragraphs (b) and (e) of the RSFSR law. Omits the statement about the need to establish production bases at higher educational establishments. Adds that public food catering should be improved.

Kazakhstan—Omits Paragraphs (a), (b), (d) and (e) of the RSFSR law. Omits the statement about the need to create a production base. Adds clause (1) of the U.S.S.R. law as well as a statement that existing higher educational establishments should be expanded and new ones established in the region.

Kirgizia—Omits paragraphs (b), (d) and (e) of the RSFSR law. Omits the statement about the need to establish production base. Adds a clause about the need for an abundant supply of texts and study aids both in Russian and Kirgiz languages, particularly for students in evening and extension-correspondence divisions.

The individual articles of the educational reform law have been presented in this appendix using the RSFSR law as a base. The articles of the U.S.S.R. law and the laws of the other republics were then compared with the articles of the RSFSR law. The reader is reminded that in terms of time sequence, it was the U.S.S.R. law which appeared first and then the laws for the 15 republics were adopted at meetings of the Supreme Soviets of the respective republics. It is evident that the laws of the individual republics have greater similarity to the RSFSR law than to the U.S.S.R. law. The concluding statement of the U.S.S.R. law, which in shorter form is also present in all the other laws, is as follows:

The union-republic Councils of Ministers shall submit to the union-republic Supreme Soviets proposals stemming from this law which will ensure that the ties between the school and life are strengthened, that universal compulsory 8-year education is instituted and that general secondary, technical vocational, specialized secondary and higher education in the republics is expanded.

The U.S.S.R. Supreme Soviet considers that bringing the schools closer to life will create the necessary conditions for the better rearing of the growing generation, which will live and work under communism. The reorganization of the public education system will be of enormous importance to the further material and spiritual development of Soviet society, will enhance the role of the Soviet school in the education and upbringing of young people, will better assure the training of highly qualified personnel for all branches of the national economy, science and culture and will contribute in even greater measure to the growing might of the Soviet Union.

Appendix to Chapter II

TABLE II-A-O.—Total, Urban and Rural Pre-school Educational Facilities, Enrollment and Teachers in the U.S.S.R., 1914-1959

TABLE II-A-1.—Aggregate Enrollment (Full- and Part-time) of All Types in Soviet Primary and Secondary Schools, 1914, 1922-59 and 1965 Projection

TABLE II-A-2.—Total, Urban and Rural Enrollment in Primary and Secondary Schools of General Education by Type of School in the U.S.S.R., 1914, 1922-40, 1945-59

Supplement to Table II-A-2

TABLE II-A-3.—Total, Urban and Rural Enrollment in Primary and Secondary Schools of General Education in the U.S.S.R., by Level of Grades, 1914, 1922-40, 1945-59

TABLE II-A-4.—Estimates of Hypothetical Population Age Cohort of 18-Year-Olds in the Soviet Union for 1955-67

TABLE II-A-5.—Population of the U.S.S.R. by Age Groups and Sex in Accordance with the Soviet Population Censuses of 1926, 1939 and 1959

TABLE II-B-1.—General Curriculum of Soviet Primary and Secondary School as of 1947

TABLE II-B-2.—General Curriculum of Soviet Primary and Secondary School as of 1952

TABLE II-B-3.—General Curriculum of Soviet Primary and Secondary School as of 1955

Supplement to Table II-B-3

TABLE II-B-4.—General Curriculum of Soviet Primary and Secondary School as of 1957

TABLE II-B-5.—General Curriculum of Soviet Primary and Secondary School Introduced in 1959

TABLE II-C-1.—Graduations in the U.S.S.R. from the 10th Grade of the Complete Secondary School or its Equivalent, 1927-60, and 1965 Projection.

TABLE II-D-1.—Total Number of Teachers in Soviet Primary and Secondary Schools, 1914, 1922-59

TABLE II-D-2.—Distribution of Soviet Primary and Secondary School Teachers by Grade Level, Urban-Rural Employment, Sex and Experience in 1955-56

TABLE II-D-3.—Distribution of Soviet Primary and Secondary School Teachers by Grade Level, Sex, Education and Experience in 1958-59

TABLE II-D-4.—Distribution of Intermediate (5-7) and Upper (8-10) Grade Teachers by Subject Matter and Education in 1955-56

TABLE II-D-5.—Distribution of Intermediate (5-7) and Upper (8-10) Grade Teachers by Subject Matter and Education in 1958-59

TABLE II-F-1.—Number of Soviet Primary and Secondary Schools, by Type of School, 1914, 1922-59

SOURCES AND NOTES TO TABLE II-A-1

Explanation of Columns

Year End Reference.—For example, 1938 means either the academic year 1938-39, or reported date as "fall 1938" in primary sources. It also refers to the usual official procedure of reporting data "at the end of the year" (with actual statistics compiled as of either September 15 or October 20 of that year).

A abc.—Aggregate enrollment in schools of general education derived as a sum of Col. B-abc and C-abc and verified independently from primary sources.

a.—In the respective Columns A,B,C,D,E,F, aggregate enrollment.

b.—In the respective Columns A,B,C,D,E,F, enrollment in upper-grades 8-10 only.

c.—In the respective Columns A,B,C,D,E,F, enrollment in the 10th grade only.

B abc.—Regular full-time primary and secondary schools.

C abc.—Adult education of all types, sum of D, E, and F.

D abc.—Evening schools for adults—schools for working youth.

E abc.—Evening schools for adults—schools for rural youth.

F abc.—All other types of schools for adults.

G.—*Rabfak*—university preparatory for workers—adult education equivalent to secondary schools.

H.—"SSP"—total enrollment in secondary semiprofessional schools of all types. Since 1949 an increasingly heavy enrollment in evening and extension-correspondence divisions, i.e., part-time education, has taken place, for which adjustment was not made.

I.—"VTLR"—Total enrollment in vocational, technical and labor reserve trade schools of all types. In the pre-1940 period, enrollment in *FZO*-type schools and equivalent.

J.—Aggregate enrollment in formal education on primary and secondary level, as a sum of total enrollments Aa, G, H, I.

K.—Enrollment on secondary school level or equivalent, as a sum of upper-grade enrollment and other equivalents—Ab, G, H, I.

Place in Table Source and Discussion

Aa, Ab 14z, 50, 55, 56.—*NKh-1957*, p. 244. This source reports enrollments for 1940: total—35,328,000 and for grades 8-10—2,558,000. These two figures are slightly lower than those incorporated in the table from *Dos-1957*, p. 273 (see below).

Aa, Ab 14z, 14x, 27, 40, 45, 56.—*Dos-1957*, p. 273. This source (p. 274) states explicitly that the totals include schools for working and rural youth, adults and *rabfak* students.

Aa, Ab 14z, 14x, 27, 40, 45, 57.—*Vestnik statistiki*, No. 10, 1958, p. 91 (1956 is omitted in this source).

Aa, 36, 57.—*Izvestia*, Dec. 5, 1958. This source states for 1936 the figure 28,300,000, as contrasted to the 28,333,000 obtained by addition.

Aa, Ab 54.—*NKh-1956*, p. 222.

Aa, Ab 57.—*SSSR-Tsif-1958*, p. 349. Also in *Vestnik statistiki*, No. 10, 1958, p. 91.

Ba 14x, 22-40, 45-55.—*KS-1956*, pp. 76-77.

Ba 56.—*NKh-1957*, p. 246.

Ba 57.—*SSSR-Tsif-1958*, p. 352.

Bb 14z, 22-40, 45-55.—*KS-1956*, p. 122.

Bb 56.—*NKh-1957*, p. 246.

Bb 57 and 58.—See Appendix Table II-A-3.

Babc 27, 40, 50, 55, 56.—*NKh-1957*, p. 246.

Bc 33-35.—*Kul't Stroi-1935*, p. 17 (see also Appendix Table II-C-1).

Babc 54.—*NKh-1956*, p. 224.

Ca 22, 25, 28-30, 34-40, 45-55.—*KS-1956*, pp. 76-77.

Ca 56.—By addition of Cb and Cc.

Ca 57.—By subtraction of Bb-57 from Ab-57.

Da, Ea 45.—*KS-1956*, pp. 116-19.

Da, Db, Ea, Eb, Fa, Fb, 50-55.—*KS-1956*, pp. 116-21, 156-57.

Da, Db, Dc, Ea, Eb, Ec, Fa, Fb, Fc 45, 50, 55, 56.—*NKh-1957*, p. 248.

Da, Db, Dc, Ea, Eb, Ec, Fa, Fb, Fc 54.—*NKh-1956*, p. 225.

Ea 22-38.—*Kul't Stroi-1940*, p. 94.

G 22-40.—*Kul't Stroi-1940*, p. 100; and *KS-1956*, pp. 76-77 (figures for 22-38 same as in *Kul't Stroi-1940*, p. 100).

H 14z, 14x, 22-40, 45-58.—Appendix Table III-A-1-E and sources to it.

I 14z, 14x, 27, 40, 45, 56.—*Dos-1957*, p. 273.

I 57.—*Vestnik statistiki*, No. 10, 1958, p. 91.

I 29-38.—*Kul't Stroi-1940*, p. 207.

I 47.—A. N. Veselov, *Nizshee professional'no-tekhnicheskoe obrazovanie v RSFSR*, Moscow, 1955, p. 252.

I 50.—Author's estimate derived as a residual of reported grand total enrollment (37 million) minus the sum of the components.

All columns for 27, 40, 50, 53-58.—*NarKhoz-1959*, pp. 806-09, 814, 817.

All columns for 1959.—*NarKhoz-1960*, pp. 725, 732. Prior to the release of this handbook, slightly different figures were given. *Pravda*, Jan. 22, 1960 (Itogi 1959), states that the aggregate primary and secondary enrollment increased from 1958 to 1959 by 1,850,000, which would give a total of 33,333,000 for 1959. *SSSR-Tsif-1959*, p. 206, states for Ba and Ca the figures 31 million and 2.3 million respectively.

Aa 65P.—*Pravda*, Dec. 24, 1958 (Kairov speech) reports the grand total in all "general education schools" as 45.3 million (as compared with a chart in *Izvestia*, Dec. 5, 1958, which explicitly compares for 1936, 1957 and 1965 the "number of students enrolled in all types of general education schools" as 28.3, 30.6 and 38 to 40 million respectively [p. 4]).

Ca 65P.—*Pravda*, Dec. 24, 1958 (Kairov speech), states that the grand total (Aa) will be 45.3 million, of which 4.8 million will be enrolled in schools for working and rural youth.

TABLE II-A-2.—Total, urban and rural enrollment in primary and secondary schools of general education by type of school in the U.S.S.R., 1914, 1922-40, 1945-59
(All figures in thousands)

Year end ^a	Aggregate enrollment			Enrollment by type of school											
				Elementary or 4-year *			Elementary—junior secondary or 7-year †			Elementary—complete secondary or 10-year ‡			Other schools (for ex- ceptional children) ^b		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
1914 ^b	7,896	1,779	6,117	7,030	965	6,065	230	192	38	636	621	15	.....	.....	.....
1922	7,322	1,808	5,514	5,993	958	5,035	737	378	359	592	472	120	(negl.)	(negl.)	(negl.)
1923	7,962	2,030	5,932	6,328	963	5,365	957	511	446	670	548	122	8	8	(negl.)
1924	9,201	2,292	6,909	7,182	1,012	6,170	1,292	667	625	716	601	115	12	12	(negl.)
1925	10,220	2,537	7,683	7,853	1,005	6,848	1,618	898	720	707	598	109	42	36	6
1926	10,730	2,631	8,099	8,020	940	7,080	1,846	974	872	791	666	125	73	51	22
1927	11,466	3,220	8,246	8,427	1,114	7,313	2,084	1,264	820	858	782	75	97	60	37
1928	12,068	3,360	8,708	8,770	1,090	7,680	2,204	1,297	907	978	897	81	116	76	41
1929	13,516	3,570	9,946	9,845	1,093	8,752	2,425	1,365	1,060	1,118	1,032	86	128	80	48
1930	17,614	3,825	13,789	12,850	1,059	11,791	4,194	2,361	1,832	384	337	46	187	68	119
1931	20,933	4,562	16,371	13,456	1,276	12,180	7,087	3,190	3,897	4	4	(negl.)	386	93	293
1932	21,397	4,834	16,563	12,092	1,192	10,901	7,921	2,394	5,527	1,243	1,181	62	140	68	73
1933	22,096	5,228	16,868	11,810	1,278	10,532	8,150	2,049	6,101	2,012	1,811	201	124	90	34
1934	23,539	6,062	17,476	11,076	1,462	9,614	9,168	1,955	7,213	3,170	2,532	638	125	113	11
1935	25,555	6,971	18,584	10,887	1,545	9,341	10,052	2,104	7,948	4,481	3,190	1,291	135	131	4
1936	27,611	7,841	19,770	10,876	1,586	9,290	10,670	2,153	8,518	5,971	4,022	1,949	94	81	13
1937	29,562	8,680	20,882	10,925	1,603	9,322	11,167	2,257	8,909	7,354	4,751	2,603	116	89	47
1938	31,517	9,375	22,142	10,646	1,502	9,144	11,712	2,243	9,469	9,028	5,554	3,474	131	77	54
1939 ^c	32,186	9,929	22,257	9,517	1,389	9,129	11,706	2,077	9,629	10,835	6,381	4,453	128	82	46
1940 ^d	34,784	10,776	24,008	9,786	1,370	8,416	12,525	2,181	10,344	12,199	7,117	5,082	274	108	166
1945	26,094	7,906	18,188	9,430	1,452	7,977	9,558	2,063	7,494	7,021	4,328	2,693	85	62	23
1946	28,582	9,292	19,290	10,499	1,868	8,631	10,456	2,497	7,959	7,551	4,874	2,677	76	54	22
1947	29,470	9,885	19,585	10,858	2,060	8,798	10,862	2,747	8,115	7,671	5,016	2,655	79	62	17
1948	31,542	10,754	20,788	10,626	2,121	8,505	12,443	3,149	9,294	8,383	5,415	2,968	90	69	21
1949	33,223	11,472	21,751	9,308	1,994	7,315	14,620	3,528	11,092	9,189	5,867	3,321	105	83	23
1950	33,314	11,751	21,563	7,518	1,641	5,877	15,509	3,640	11,869	10,171	6,380	3,791	116	91	25
1951	32,452	11,847	20,605	5,887	1,312	4,575	14,804	3,320	11,484	11,641	7,119	4,522	120	97	24
1952	30,953	11,833	19,120	4,503	1,022	3,481	13,599	3,112	10,488	12,726	7,598	5,128	125	102	23
1953	30,208	12,163	18,045	3,728	882	2,846	12,228	2,816	9,412	14,123	8,361	5,762	129	104	24
1954	29,553	12,370	17,183	3,546	841	2,705	10,729	2,451	8,278	15,149	8,974	6,174	129	104	26
1955	28,217	12,126	16,092	3,600	818	2,782	9,372	2,198	7,174	15,129	9,016	6,113	117	94	23
1956	28,185	12,385	15,800	4,060	.....	.....	8,600	.....	.....	15,400	.....	.....	125	.....	.....
1957	28,694	13,000	15,694	4,300	.....	.....	8,500	.....	.....	15,800	.....	.....	100	.....	.....
1958	29,600	13,700	15,900	4,500	.....	.....	8,900	.....	.....	16,100	.....	.....	100	.....	.....
1959	31,000	.....	.....	4,500	.....	.....	10,100	.....	.....	16,300	.....	.....	100	.....	.....

negl.—negligible.

^a Year end refers to the fall of the corresponding academic year.

^b Within boundaries of the U.S.S.R. prior to Sept. 17, 1939 (this refers also to all years 1922-39 inclusive).

^c Excluding enrollment in the annexed territories.

^d Including enrollment in annexed territories.

^e For the period 1922-30 refers primarily to schools of the first level (*shkoly pervoi stupeni*).

^f For the period 1922-30 refers to enrollment in combination schools, which had the first level and first concentrate of the second level schools.

^g For the period 1922-30 refers to the combination of the first and second level schools (or the 9-year school).

^h Schools for exceptional children are those for the deaf, mute, blind, physically handicapped and mentally retarded. Some pupils of orphanages are also included.

SOURCES AND NOTES TO TABLE II-A-2

Place in table Sources and discussion

1914, 1922-56.—NKh-1957, p. 246; KS-1956, pp. 76-79, 80-85; Dos-1957, p. 274. Note: last-figure differences between the totals and the sum of the components, whenever they occur, are due to rounding.

1957.—NarKhoz-1959, pp. 812-13. SSSR-Tsif-1958, p. 352. Furthermore the following estimates are possible. Pravda, Dec. 20, 1957, states that 1957 enrollment was about 28,500,000. Pravda, July 24, 1958, states that total general school enrollment increased in 1957 as compared with 1956 by about 500,000 which is actually the approximate magnitude of change (1956: 28,185,000 plus 500,000 gives 1957 as about 28,685,000).

1958.—NarKhoz-1959, pp. 812-13. Izvestia, Dec. 24, 1958

(Kairov's speech at the Supreme Soviet), stated that actual enrollment in the fall of 1958 was 29,400,000. Anticipated enrollment was to be 29,900,000 (Pravda, Dec. 20, 1957), and actual enrollment was short thereof by half a million. 1959.—SSSR-Tsif-1959, p. 206; NarKhoz-1960, p. 729.

SUPPLEMENT TO TABLE II-A-2

The enrollment in 1914 within the Soviet Union's boundaries, including territories annexed after Sept. 1939, was: Total—9,656,000, of which urban was 2,249,000, rural 7,407,000. Total enrollment in 1920 was: 9,781,000 and in 1921, 8,439,000 (NarKhoz-1932, p. 507). The estimated enrollment during the Second World War was in 1941: 19,617,000; 1942—15,667,000; 1943—19,934,000; 1944—22,625,000 (SPM, pp. 264, 267).

TABLE II-A-3.—Total, urban and rural enrollment in primary and secondary schools of general education in the U.S.S.R., by level of grades, 1914, 1922-40, 1945-59
(All figures in thousands)

Year end ^a	Aggregate enrollment ^b			Enrollment by level of grades								
				Grades 1-4 ^c			Grades 5-7 ^d			Grades 8-10 ^e		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
1914 ^f	7,896	1,779	6,117	7,390	1,354	6,036	383	305	78	123	120	3
1922.....	7,322	1,808	5,514	6,607	1,308	5,299	617	424	194	98	76	22
1923.....	7,962											
1924.....	9,190	2,280	6,909	8,352	1,669	6,683	692	487	205	146	125	21
1925.....	10,178	2,501	7,677	9,178	1,780	7,398	862	600	261	138	120	18
1926.....	10,657	2,580	8,077	9,462	1,766	7,697	1,059	696	363	136	118	18
1927.....	11,389	3,160	8,209	9,910	2,126	7,784	1,332	919	413	127	114	12
1928.....	11,952	3,284	8,667	10,350	2,130	8,220	1,438	1,002	435	165	152	13
1929.....	13,388	3,489	9,898	11,583	2,233	9,350	1,615	1,081	533	190	175	15
1930.....	17,427	3,757	13,670	15,385	2,538	12,847	1,976	1,163	813	66	56	10
1931.....	20,547	4,469	16,078	17,732	3,172	14,561	2,814	1,297	1,517	1	1	negl.
1932.....	21,257	4,767	16,490	17,675	3,393	14,282	3,515	1,311	2,204	67	62	5
1933.....	21,972	5,138	16,834	17,749	3,611	14,138	4,084	1,403	2,680	139	124	15
1934.....	23,414	5,949	17,465	18,280	4,115	14,165	4,848	1,604	3,244	286	230	56
1935.....	25,420	6,840	18,580	19,077	4,533	14,544	5,852	1,950	3,902	491	356	135
1936.....	27,517	7,761	19,757	20,078	4,957	15,121	6,717	2,318	4,399	723	486	237
1937.....	29,446	8,611	20,835	20,755	5,202	15,553	7,677	2,768	4,909	1,013	641	373
1938.....	31,386	9,298	22,088	21,202	5,240	15,962	8,780	3,203	5,577	1,404	855	549
1939 ^g	32,058	9,847	22,211	20,472	5,165	15,307	9,715	3,578	6,137	1,871	1,103	767
1940 ^h	34,510	10,668	23,842	21,375	5,335	16,041	10,767	3,965	6,802	2,368	1,369	999
1945.....	26,009	7,844	18,165	19,858	5,492	14,366	5,175	1,804	3,371	975	547	428
1946.....	28,506	9,239	19,267	22,577	6,800	15,777	4,950	1,855	3,095	979	584	395
1947.....	29,391	9,823	19,568	23,494	7,298	16,196	4,957	1,964	2,994	939	561	378
1948.....	31,452	10,685	20,767	23,732	7,394	16,338	6,698	2,694	4,005	1,021	597	424
1949.....	33,118	11,390	21,728	22,657	7,070	15,587	9,309	3,660	5,649	1,151	660	491
1950.....	33,198	11,660	21,538	19,671	6,144	13,527	12,031	4,658	7,373	1,496	858	638
1951.....	32,332	11,750	20,582	16,443	5,221	11,222	13,541	5,170	8,371	2,348	1,359	989
1952.....	30,828	11,731	19,097	13,394	4,477	8,917	14,087	5,331	8,757	3,346	1,923	1,423
1953.....	30,079	12,059	18,020	12,106	4,433	7,673	13,477	5,071	8,405	4,496	2,554	1,942
1954.....	29,424	12,266	17,158	12,663	5,103	7,560	11,616	4,299	7,317	5,145	2,864	2,281
1955.....	28,101	12,032	16,069	13,579	5,673	7,906	9,268	3,472	5,795	5,253	2,886	2,367
1956.....	28,060	12,330	15,730	15,580	6,580	9,000	7,440	3,010	4,430	5,040	2,740	2,300
1957.....	28,590	12,870	15,720	17,000	7,260	9,740	7,240	3,280	3,960	4,350	2,330	2,020
1958.....	29,600	13,700	15,900	17,700	7,600	10,100	8,400	4,100	4,300	3,400	1,900	1,500
1959.....	31,000	14,600	16,400	18,400	8,100	10,300	9,700	4,800	4,900	2,800	1,600	1,200

^a Year end refers to the fall or the corresponding academic year and enrollment is reported variably as of Sept. 15 to Nov. 1 of the year.

^b Aggregate enrollment excludes pupils of schools for exceptional children and thus differs from aggregate enrollment reported in Table II-A-2 for most years by the number of pupils enrolled in such schools (Column "Other Schools" in Table II-A-2).

^c Figures include preparatory grade where it exists (also known as "zero grade" in the 1920's and 1930's). For the period of the 1920's the data refer to schools of the first level (*shkoly pervoi stupeni*) or first concentration (*pervyi kontsentrat*).

^d For the period of the 1920's statistics refer to lower forms of schools of the second level (*shkoly vtoroi stupeni*) or second concentration (*vtoroi kontsentrat*).

^e For the period of the 1920's statistics refer to upper forms of the schools of the second level or third concentration (*tretii kontsentrat*). Figures refer to Grades 8-11 whenever applicable.

^f Enrollment within pre-1939 Soviet boundaries.

^g Exclusive of territorial annexations in 1939-40.

^h Enrollment within the present boundaries. Including annexations after Sept. 17, 1939.

SOURCES AND NOTES TO TABLE II-A-3

1914, 1922-55: *KS-1956*, pp. 122-23; 1956; *NKh-1957*, p. 246. 1957 and 1958: *NarKhoz-1959*, pp. 814-15. 1958 and 1959, as well as earlier years from *NarKhoz-1960*, p. 730. NOTE: —Last-figure differences between the totals and the sum of the components, whenever they occur, are due to rounding.

Before the appearance of *NarKhoz-1959* and *NarKhoz-1960*, the following estimates were made for 1957 and 1958:

Estimate of 1957 total enrollment: Reported total enrollment (including schools for the physically handicapped) was 28,694,000 (*SSSR-Tsif-1958*, p. 352). Assuming the figure 125,000 (as in 1956) for schools for the physically handicapped, we obtain about 28,570,000 for total enrollment by grade. The actual enrollment now reported in *NarKhoz-1959* is 28,600,000.

Estimate of 1958 total enrollment: Reported total enrollment is 29,400,000 (*Izvestia*, Dec. 24, 1958). Making an allowance of 100,000 for schools for handicapped children, we obtain about 29,300,000 for total enrollment by grade.

The actual enrollment now reported in *NarKhoz-1959* is 29,500,000.

Estimate of 1957 enrollment in grades 8-10: At the 13th Congress of the Komsomol its secretary, A. N. Shelepin, stated that "in the current academic year there were about [slightly more than] 4,000,000 students in grades 8-10." This statement, which reveals a decline in upper-grade enrollment by about 1,000,000 between the fall of 1956 and of 1957, may be checked as follows. Enrollment in grades 8-10 in the fall of 1957 in schools under the jurisdiction of the Ministry of Education of the Russian SFSR was 2,123,000 (*Uchitel'skaia gazeta*, April 3, 1958; Minister of Education E. I. Afanasenko's speech), as compared with 2,561,200 a year earlier (*KS-RSFSR-1958*, pp. 204-05). Note that references are to schools under the RSFSR Ministry of Education only. The Ministry of Railroads of the U.S.S.R. controls additional schools (total enrollment in grades 8-10 in 1956 was 2,728,800). Assuming the RSFSR's proportion in the U.S.S.R.'s total was 50.8 percent (as it was in 1956), we obtain an estimated

enrollment in grades 8-10 of 4,180,000 for 1957. This latter figure is in close agreement with the statement by Shelepin. The actual enrollment now reported in *NarKhoz-1959* is 4,350,000.

Estimate of 1958 enrollment in grades 8-10: The 1958 enrollment in grades 8-10 may be derived in two ways. *Izvestia*, Dec. 24, 1958 (Kairov's speech), states that enrollment in grades 1-7 in 1958 was 26,000,000. Subtracting this from the total enrollment, we get 3,400,000. The second way is more complicated. 1958 enrollment in the RSFSR (all types of schools) in all grades was 16,500,000, and in grades 1-7 was 14,900,000 (*Izvestia*, Dec. 25, 1958 [Afanasenko's speech]). Thus in grades 8-10 there were 2,600,000 students in general education and working and rural youth schools. The estimated enrollment in grades 8-10 of working and rural youth schools was 650,000 (25

percent of the total enrollment in grades 8-10). Thus enrollment in grades 8-10 of regular schools was 1,950,000. The RSFSR accounts for 54 percent of the U.S.S.R.'s enrollment in grades 8-10, and therefore the estimate of 1958 enrollment in grades 8-10 for the U.S.S.R. is 3,611,000. The estimate of 3,600,000 was incorporated into the table. Enrollment in grades 8-10 in schools for working and rural youth was about 1,500,000. Total upper-grade enrollment in all types of schools was about 5,100,000. Apparently by withholding recent figures and aggregating enrollment in various schools, what the Russians are trying to do is to conceal the drop in enrollment in the upper grades. Should the statistics be released in the future, this drop will become evident. The actual enrollment now reported in *NarKhoz-1959* is 3,400,000.

TABLE II-A-4.—*Estimates of hypothetical population age cohort of 18-year-olds in the Soviet Union for 1955-67*
(All figures rounded in millions)

Year	Actual enrollment, grades 1-4	Hypothetical population estimates by age groups						Year
		Age group 7-10	9 yr.	Age group 7-10	9 yr.	18-year-olds		
		A	AI	B	BI	AII	BII	
	X							
1946.....	22.6	18.08	4.52	18.83	4.70	4.38	4.55	1955
1947.....	23.5	18.80	4.70	19.58	4.89	4.55	4.74	1956
1948.....	23.7	18.96	4.74	19.75	4.94	4.59	4.78	1957
1949.....	22.7	18.16	4.54	18.91	4.73	4.40	4.58	1958
1950.....	19.7	15.76	3.94	16.41	4.10	3.81	3.97	1959
1951.....	16.4	13.12	3.28	13.66	3.41	3.18	3.30	1960
1952.....	13.4	10.72	2.68	11.16	2.79	2.60	2.70	1961
1953.....	12.1	9.68	2.42	10.08	2.52	2.34	2.44	1962
1954.....	12.7	10.16	2.54	10.66	2.66	2.46	2.57	1963
1955.....	13.6	10.88	2.72	11.33	2.83	2.63	2.74	1964
1956.....	15.6	12.48	3.12	13.00	3.25	3.02	3.15	1965
1957.....	17.0	13.60	3.40	14.66	3.66	3.29	3.55	1966
1958.....	18.0 ^a	14.40	3.60	15.00	3.75	3.49	3.63	1967

^a Officially reported in *NarKhoz-1959*, as 17,700,000.

SOURCES AND NOTES TO TABLE II-A-4

X.—Actual enrollment. Data same as in appendix table II-A-3 above. These estimates were made on the basis of data prior to the publication of *NarKhoz-1959*, where enrollment in grades 1-4 for 1958 was reported as 17,700,000 instead of 18,000,000 used in the table.

A.—Hypothetical age cohort of 7- to 10-year-olds derived on the assumption that school enrollment constitutes 125 percent of the respective age group.

AI.—Hypothetical age group of 9-year-olds, derived by dividing the figures in Column A by four.

B.—Hypothetical age cohort of 7- to 10-year-olds, derived on the assumption that school enrollment constitutes 120 percent of the respective age group.

BI.—Hypothetical age group of 9-year-olds derived by dividing figures in Column B by four.

AII and BII.—Hypothetical age group of 18-year-olds, derived by applying the age specific mortality rates (Lorimer, *The Population of the Soviet Union*, p. 124, which gives these rates for 1938-39 on the basis of which cumulative survival rate of 969 per 1,000 was computed for 18-year-olds upon 9-year-olds).

General note.—The estimating procedure applied above is

based on the assumption of invariable correlation of school enrollment to the respective age cohort. The correlation of 124 percent was true for 1938-39 data (see *SPM*, p. 49, and text in Ch. II above), when actual enrollment was correlated with the actual population. The data for 1953-55 (*KS-1956*, pp. 172-73) suggest that the cumulative rate of repeaters in grades 1-4 would account (if no drop-outs take place because of the compulsory schooling requirement) for the swelling of the school enrollment in grades 1-4 to 129 percent of its normal size. Despite the compulsory schooling requirement, there evidently are drop-outs which reduce the correlation ratio.

The reader should be aware that these estimates are derived under simplified assumptions. A number of population studies which are made under governmental and academic auspices use Soviet school statistics for population estimates by age cohort by applying varying assumptions and variable correlation ratios. In this study it was decided to forego complicating refinements for the sake of straight-forwardness. Furthermore, it should be noted that in the opinion of this researcher, the derivations above of the hypothetical age cohort of 18-year-olds result in maximal estimates.

TABLE II-A-5.—Population of the U.S.S.R. by age groups and sex in accordance with the Soviet population censuses of 1926, 1939 and 1959
(All figures in thousands)

Official census reportings of population groupings	(A) December 17, 1926			(B) January 17, 1939			(C) January 17, 1939, adjusted	(D) Estimate 1939, adjusted to postwar boundaries	(E) January 15, 1959*		
	Total	Male	Female	Total	Male	Female	Total	Total	Total	Male	Female
0-9.....	38,593	18,888	18,705	39,308	19,765	19,543	39,833	43,476	46,363	23,608	22,755
(0-7).....	22,323	11,238	11,085	31,412	11,028	10,779	31,595	(34,784)	(38,088)	(18,888)	(18,200)
(0-4).....	15,270	7,650	7,620	21,807	8,737	8,764	21,807	.....	.....	.....	.....
(5-9).....	17,091	8,643	8,448	20,976	10,465	10,521	21,625	(23,638)	(14,278)	(7,210)	(7,068)
(10-15).....	11,226	5,647	5,579	16,409	.....	.....	(24,665)	28,365	17,133	(8,653)	(8,480)
(8-11).....	11,521	5,834	5,687	13,336	.....	.....	16,476	(20,042)	(14,982)	.....	.....
(12-14).....	16,977	8,133	8,844	16,429	.....	.....	13,387	(17,019)	(8,565)	.....	.....
15-19.....	.....	.....	.....	.....	.....	.....	15,198	(17,757)	(17,530)	.....	.....
(16-19).....	.....	.....	.....	.....	.....	.....	(12,158)	13,030	14,675	.....	.....
(10-19).....	34,068	16,776	17,292	37,415	18,575	18,840	36,823	41,395	31,808	16,066	15,742
20-24.....	13,813	6,712	7,101	14,371	7,164	7,207	.....	15,768	20,343	10,056	10,287
25-29.....	10,037	5,490	6,547	16,449	7,937	8,512	30,903	18,520	18,190	8,917	9,273
(20-29).....	23,850	12,202	11,648	30,820	15,101	15,719	.....	34,288	38,533	18,973	19,560
30-34.....	9,065	4,297	4,768	13,735	6,541	7,194	.....	15,598	18,999	8,611	10,388
35-39.....	8,452	3,994	4,458	11,748	5,330	6,418	.....	12,958	11,590	4,528	7,062
(30-39).....	17,517	8,291	9,226	25,483	11,871	13,612	25,521	28,556	30,589	13,139	17,450
40-44.....	6,955	3,393	3,562	8,520	3,748	4,772	.....	9,603	10,408	3,998	6,410
45-49.....	5,908	2,893	3,015	6,807	2,986	3,821	.....	7,776	12,264	4,706	7,558
(40-49).....	12,863	6,286	6,577	15,327	6,734	8,593	15,334	17,379	22,672	8,704	13,968
50-54.....	5,041	2,343	2,698	5,977	2,690	3,287	.....	.....	10,447	4,010	6,437
55-59.....	4,205	1,887	2,318	4,955	2,235	2,720	.....	.....	8,699	2,906	5,793
(50-59).....	9,246	4,230	5,016	10,932	4,925	6,007	10,922	12,533	19,146	6,916	12,230
60-69.....	6,399	2,866	3,533	7,138	3,085	4,054	.....	8,535	11,736	4,099	7,637
70 and over.....	3,404	1,453	1,951	4,055	1,621	2,454	.....	4,462	7,972	2,541	5,431
(60 and over).....	9,803	4,319	5,484	11,193	4,706	6,487	11,185	12,997	19,708	6,640	13,068
Unspecified.....	88	50	38	.....	.....	.....	36	.....	8	4	4
Total population.....	145,028	71,043	75,985	170,467	81,665	88,802	170,557	190,678	208,827	94,050	114,777
Special population groups relevant to school attendance:											
Elementary, ages 8-11.....	11,226	5,647	5,579	16,409	.....	.....	16,476	(20,042)	(14,982)	.....	.....
Jr. secon., ages 12-14.....	11,521	5,834	5,687	13,336	.....	.....	13,387	(17,019)	(8,565)	.....	.....
Sr. secon., ages 15-17.....	10,684	5,159	5,525	(9,858)	.....	.....	(9,120)	(11,241)	(10,193)	.....	.....
School age, ages 8-17.....	33,431	16,640	16,791	39,603	.....	.....	(38,983)	(48,302)	(33,740)	.....	.....
Labor force, ages 15-60.....	80,453	.....	.....	98,991	.....	.....	97,878	110,873	128,470	56,588	71,882

Sources: A and B: F. Lorimer, *The Population of the Soviet Union*, Geneva: League of Nations, 1946, pp. 141, 143, 231-33. Observe that the adjusted grand total population reported is 147,000,000 for 1956. C: *Vestnik statistiki*, No. 6, 1956, p. 90. D and E: *Prazda*, Feb. 4, 1960; *NarKhoz-1960*, p. 11. Numbers in parentheses are interpolations, or are derived by addition.

TABLE II-B-1.—General curriculum of Soviet primary and secondary school as of 1947

Subjects of instruction	Primary—complete secondary (10-year) school										Primary—incomplete secondary (7-year) school										Upper grades 8-10																													
	Primary (4-year) school					Intermediate grades 5-7					Total, grades 1-4					Instruction hours per week in grades:					Total, grades 5-7					Instruction hours per week in grades:					Total, grades 8-10					Total, grades 1-10														
	Elementary grades 1-4																																																	
	Instruction hours per week in grades:																																																	
	1	2	3	4		5	6	7	Hours	Per cent	8	9	10	Hours	Per cent	11	12	13	Hours	Per cent	14	15	16	17	Hours	Per cent	18	19	20	Hours	Per cent	21	22	Hours	Per cent															
Group I: General (languages, literatures, humanities and social sciences)	14	14	15	13/13	1,848	56.0	19	18	15/16	1,233	55.3	3,581	55.6	1,486	47.6	5,067	53.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1. Russian language and literature	14	14	15	8	1,683	51.0	10	8	6	792	25.2	2,475	38.5	1	3.2	2,574	26.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(1, 2) Total 1-2	14	14	15	8	1,683	51.0	10	8	6	792	25.2	2,475	38.5	1	3.2	2,574	26.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3. Foreign language (German, French, English) . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4. History . . . . .	.....	.....	.....	2/3	83	2.5	2	3	2	231	7.4	314	4.9	4	4/3	380	12.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5. Constitution of the U.S.S.R. . . . .	.....	.....	.....	3/2	82	2.5	3	3	2/3	281	9.0	363	5.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6. Geography . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7. Psychology . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8. Logic . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Group II: Scientific (mathematics and sciences)	7	7	6	10	990	30.0	15	11	14/13	1,105	35.2	2,095	32.6	13	13/13	14/14	1,336	42.9	3,431	35.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
9. Arithmetic	7	7	6	7	891	27.0	7	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10. Mathematics (algebra, geometry, trigonometry) . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(9, 10) Total 9-10	7	7	6	7	891	27.0	7	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11. General science (nature studies, introductory and biology) . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12. Chemistry . . . . .	.....	.....	.....	3	99	3.0	2	3	2	231	7.4	330	5.1	2	2/3	4/3	132	4.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13. Physics . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14. Astronomy . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Group III: Applied (activity, skill and vocational arts)	3	3	4	4	462	14.0	3	3	3	297	9.5	759	11.8	3	3	297	9.5	1,056	11.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
15. Physical education (including military training for boys)	1	1	2	2	198	6.0	2	2	2	198	6.3	396	6.1	2	2	198	6.3	594	6.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
16. Drawing	1	1	1	1	132	4.0	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17. Drafting . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18. Singing	1	1	1	1	132	4.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19. through 24 (other subjects) . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	24	24	25	27	3,300	100.0	31	32	32	3,135	100.0	6,435	100.0	32	32	32	3,119	100.0	9,554	100.0															

Sources and Notes: *Medynskii-1947*, pp. 51, 64, 76. Whole numbers refer to instruction hours during each week throughout the school year. In the fractions the numerator refers to the number of instruction hours in a given subject during the weeks of the fall term; the denominator refers to the number of instruction hours during the weeks of the spring term. The academic year consists of 33 instruction weeks. Other subjects were introduced at later dates: see Table II-B-2, Table II-B-3 and Table II-B-4. The basic data for the curricular structure were reconstructed from the Soviet primary source cited; arrangement, grouping and computed distributions are those of the author.

TABLE II-B-2.—General curriculum of Soviet primary and secondary school as of 1952

Subjects of instruction	Primary—complete secondary (10-year) school													
	Primary (4-year) school							Intermediate grades 5-7						
	Primary—incomplete secondary (7-year) school							Instruction hours per week in grades:						
	Elementary grades 1-4							Total, grades 1-4						
	1	2	3	4	Hours	Per cent	Total, grades 1-4	1	2	3	4	Hours	Per cent	Total, grades 1-4
<i>Group I: General (languages, literatures, humanities and social sciences)</i>														
1. Russian language and literature	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
2. Other literature	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
(1, 2) Total 1-2	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
3. Foreign language (German, French, English)	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
4. History	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
5. Constitution of the U.S.S.R.	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
6. Geography	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
7. Psychology	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
8. Logic	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
<i>Group II: Scientific (mathematics and sciences)</i>														
9. Arithmetic	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
10. Mathematics (algebra, geometry, trigonometry)	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
(9, 10) Total 9-10	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
11. General science (nature studies, introductory and biology)	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
12. Chemistry	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
13. Physics	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
14. Astronomy	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
<i>Group III: Applied (activity, skill and vocational arts)</i>														
15. Physical education (including military training for boys)	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
16. Drawing	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
17. Drafting	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
18. Singing	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
19. through 24: (other subjects)	15	14	15	14	1,716	52.0	57.5	19	17/17	15/16	1,700	54.2	3,597	55.9
Total	24	24	25	27	3,300	100.0	100.0	31	32	32	3,135	100.0	6,435	100.0

Sources and Notes: *Medynskii-1952*, pp. 59, 74, 86. Whole numbers refer to instruction hours during each week throughout the school year. In the fractions the numerator refers to the number of instruction hours in a given subject during the weeks of the fall term; the denominator refers to the number of instruction hours during the weeks of the spring term. The academic year consists of 33 instruction weeks. Other subjects were introduced at later dates: see Table II-B-3 and Table II-B-4. The basic data for the curricular structure were reconstructed from the Soviet primary source cited; arrangement, grouping and computed distributions are those of the author. For a description of the course contents of the individual subjects of instruction listed above, see *SPW*, pp. 275-77.

of the spring term. The academic year consists of 33 instruction weeks. Other subjects were introduced at later dates: see Table II-B-3 and Table II-B-4. The basic data for the curricular structure were reconstructed from the Soviet primary source cited; arrangement, grouping and computed distributions are those of the author. For a description of the course contents of the individual subjects of instruction listed above, see *SPW*, pp. 275-77.

TABLE II-B-3.—General curriculum of Soviet primary and secondary school as of 1955

Subjects of instruction	Primary—complete secondary (10-year) school													
	Primary (4-year) school							Intermediate grades 5-7						
	Primary—incomplete secondary (7-year) school							Instruction hours per week in grades:						
	Elementary grades 1-4							Total, grades 1-4						
	1	2	3	4	Hours	Per cent	Total, grades 1-4	1	2	3	4	Hours	Per cent	Total, grades 1-4
<i>Group I: General (languages, literatures, humanities and social sciences)</i>														
1. Russian language and literature	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
2. Other literature	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
(1, 2) Total 1-2	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
3. Foreign language (German, French, English)	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
4. History	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
5. Constitution of the U.S.S.R.	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
6. Geography	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
7. Psychology	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
8. Logic	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
<i>Group II: Scientific (mathematics and sciences)</i>														
9. Arithmetic	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
10. Mathematics (algebra, geometry, trigonometry)	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
(9, 10) Total 9-10	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
11. General science (nature studies, introductory and biology)	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
12. Chemistry	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
13. Physics	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
14. Astronomy	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
<i>Group III: Applied (activity, skill and vocational arts)</i>														
15. Physical education (including military training for boys)	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
16. Drawing	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
17. Drafting	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
18. Singing	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
19. Manual labor and school work shop	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
20. Obligatory excursions to production enterprises	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
21. Practical experience in industrial or agricultural production	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
22. through 24: (other subjects)	13	13	13	13	1,584	49.0	53.0	18	16	13	1,551	49.0	3,267	51.0
Total	24	24	24	26	3,234	100.0	100.0	32	32	32	3,168	100.0	6,402	100.0

a not allocated per week.

Sources and Notes: *Medynskii-1955*, pp. 60, 73, 74, 84. Whole numbers refer to instruction hours during each week throughout the school year. In the fractions the numerator refers to the number of instruction hours in a given subject during the weeks of the fall term; the denominator refers to the number of instruction hours during the weeks of the

spring term. The academic year consists of 33 instruction weeks. Other subjects were introduced at later dates: see Table II-B-4. The basic data for the curricular structure were reconstructed from the Soviet primary source cited; arrangement, grouping and computed distributions are those of the author.

SUPPLEMENT TO TABLE II-B-3

TEXTBOOKS FOR TEN-YEAR SCHOOLS IN U.S.S.R.¹

The following listing of textbooks was prepared by the U. S. Office of Education, Division of International Relations, which has copies of a large number of these texts. The author is indebted to W. K. Medlin for providing him with this list.

GRADE I

Russian Language and Literature:

- Bukvar'* (Primer). Compiled by a group of co-workers in RSFSR Acad. of Pedagog. Sciences. 6th ed.
 VOSKRESENSKAIA, A. I. *Bukvar'* (Primer) 15th ed.
 KOSTIN, N. A. *Uchebnik russkogo iazyka. Grammatika, pravopisanie, razvitie rechi* (Textbook of Russian Language. Grammar, penmanship, speech development). For grade one. 5th ed.
 SOLOVEVA, E. E. and others. *Rodnaia rech'* (The Mother Tongue). Reader for grade one. 15th ed.

Arithmetic:

- PCHELKO, A. S. and others. *Arifmetika* (Arithmetic). Textbook for grade one. 4th ed.

GRADE II

Russian Language and Literature:

- KOSTIN, N. A. *idem.* For grade two. 6th ed., Uchpedgiz.
 SOLOVEVA, E. E. and others. *idem.* Reader for grade two. 15th ed.

Arithmetic:

- PCHELKO, A. S. and others. *idem.* Textbook for grade two. 5th ed.

GRADE III

Russian Language and Literature:

- ZAKOZHURNIKOVA, M. L. and ROZHDESTVENSKII, N. S. *Uchebnik russkogo iazyka* (Textbook for Russian Language). For grade three. 5th ed., Uchpedgiz.
 SOLOVEVA, E. E. and others. *idem.* Reader for grade three. 14th ed.

Arithmetic:

- PCHELKO, A. S. and others. *idem.* Textbook for grade three. 4th ed.

GRADE IV

Russian Language and Literature:

- ZAKOZHURNIKOVA, M. L. and ROZHDESTVENSKII, N. S. *idem.* For grade four. 4th ed.
 SOLOVEVA, E. E. and others. *idem.* Reader for grade four. 14th ed.

Arithmetic:

- PCHELKO, A. S. and others. *idem.* Textbook for grade three. 4th ed.

Natural Science:

- SKATKIN, M. N. *Kniga dlia chteniia po estestvoznaniu* (Reader for natural science). For grade four. 4th ed.

Geography:

- BLONSKAIA, N. I. and RAUSH, V. A. *Kniga dlia chteniia po geografii* (Reader for geography). For grade four. 4th ed.

History:

- ALEKSEEV, S. P. and others. *Istoriia SSSR* (History of the U.S.S.R.) For grade four. 3d ed.

GRADE V

Russian Language and Literature:

- BARKHUDAROV, S. G. and KRIUCHKOV, S. E. *Uchebnik russkogo iazyka* (Textbook of Russian). Part 1. *Fonetika i morfologiya* (Phonetics and morphology). For grades 5-6. 5th ed.
 GOLUBKOV, V. V. and others. *Rodnaia literatura* (Native literature). Reader for grade 5. 5th ed.
 USHAKOV, D. N. and KRIUCHKOV, S. E. *Orfograficheskii slovar'* (Orthographic dictionary). For grades 5-10. 14th ed.

Arithmetic:

- SHEVCHENKO, I. N. *Arifmetika* (Arithmetic). For grades 5-6. 3d ed.
 PONOMAREV, S. A. and SYRNEV, N. I. *Sbornik zadach i uprazhnenii po arifmetike* (Manual of problems and exercises in arithmetic). For grades 5-6. 5th ed.
 VESSEVIATSKII, V. B. *Botanika* (Botany). For grades 5-6. 3d ed.

Geography:

- ZASLAVSKII, I. I. and GERASIMOVA, T. P. *Fizicheskaiia geografiia* (Physical geography). For grade 5. 4th ed.

History:

- KOROVKIN, F. P. *Istoriia drevnego mira* (History of the ancient world). For grades 5-6. 4th ed.

Foreign languages:

- TSVETKOVA, Z. M. and SHPIGEL, TS. G. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 5. 4th ed.
 BAKHAREVA, M. A. and KALACHEVA, Z. V. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 5. 4th ed.
 GRIGOR'EVA, V. M. and others. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 5. 4th ed.

Practical exercises:

- KIVOTOV, S. A. *Prakticheskie zaniatiia na shkol'nom uchebno-opytном uchastke* (Practical exercises in the school experimental gardens). Study aid for grades 5-6. 3d ed.

GRADE VI

Russian language and literature:

- BARKHUDAROV, S. G. and KRIUCHKOV, S. E. *Uchebnik russkogo iazyka* (Textbook of Russian). Part 2. *Sintaksis* (Syntax). For grades 6-7. 5th ed.
 BOCHAROV, G. K. *Rodnaia literatura* (Native literature). Reader for grade 6. 4th ed.

Mathematics:

- BARSUKOV, A. N. *Algebra* (Algebra). Part 1. For grades 6-7. 3d ed.
 NIKITIN, N. N. and FETISOVA, A. I. *Geometriia* (Geometry). Part 1. For grades 6-9. 3d ed.
 LARICHEV, P. A. *Sbornik zadach i uprazhnenii po algebre* (Manual of problems and exercises in algebra). For grades 6-7. 10th ed.
 NIKITIN, N. N. *Sbornik zadach po geometrii* (Manual of problems in geometry). Part 1. For grades 6-7. 2d ed.

Physics:

- PERYSKIN, A. V. and others. *Fizika* (Physics). For grade 6. 10th ed.

Geography:

- SCHASTNEV, P. N. and others. *Fizicheskaiia geografiia chastei sveta* (Physical geography of parts of the world). For grade 6. 4th ed.

History:

- KOSMINSKII, E. A. *Istoriia srednikh vekov* (History of the Middle Ages). For grades 6-7. 5th ed.

¹List published in *Sovetskie knigi*, No. 147, 1957 (Moskva: Vsesoiuznoe ob'edinenie "Mezhdunarodnaia Kniga", 1957), pp. 41-52. All textbooks are published by the State Publishing House for Textbooks (Uchpedgiz).

Foreign languages:

- NELIDOV, I. A. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 6. 3d ed.
 PARCHEVSKII, K. K. and ROISENBLIT, E. B. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 6. 3d ed.
 KUDRIAVTSEVA, O. E., ZLATOGORSKAIA, R. L., and STRODT, L. M. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 6. 3d ed.

GRADE VII

Literature:

- BOCHAROV, G. K. *Rodnaia literatura* (Native literature). Reader for grade 7. 4th ed.

Physics:

- PERYSHKIN, A. V. and others. *Fizika* (Physics). Part 2. For grade 7. 10th ed.

Chemistry:

- KIRIUSHKIN, D. M. *Khimiia* (Chemistry). For grade 7. 5th ed.

Geography:

- STROEV, K. F. *Geografiia SSSR* (Geography of the U.S.S.R.). For grade 7. 2d ed.

Mechanical drawing:

- ABRIKOSOV, A. A. *Cherchenie* (Mechanical drawing). Part 1. For grade 7. 6th ed.

Zoology:

- SHALAEV, V. F. and RYKOV, N. A. *Zoologiia* (Zoology). For grade 7. 3d ed.

Foreign Languages:

- BELOVA, E. V. and TODD, L. R. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 7. 10th ed.
 LIVSHITS, E. I. and RONSKAIA, L. N. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 7. 10th ed.
 IVANOV, D. B. and others. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 7. 2d ed.

Practical exercises:

- KIVOTOV, S. A. *Prakticheskie zaniatiia na uchebno-opytnom uchastke* (Practical exercises in the school experimental gardens). Study aid for grade 7. 2d ed.

GRADE VIII

Russian language and literature:

- GREKOV, V. F. and others. *Posobie dlia zaniatii po russkomu iazyku v starshikh klassakh (8-10 klassy)* (Aid for the study of Russian in the upper grades (Grades 8-10). 7th ed.
 BRODSKII, N. L. and KUBIKOV, I. N. *Khrestomatiia po russkoi literature* (Reader in Russian literature). For grade 8. 21st ed.
 FLORINSKII, S. M. *Russkaia literatura* (Russian literature). For grades 8-10. 5th ed.

Mathematics:

- KISELEV, A. P. *Algebra* (Algebra). Part 2. For grades 8-10. 35th ed.
 LARICHEV, P. A. *Sbornik zadach i uprazhnenii po algebre* (Manual of problems and exercises in algebra). For grade 8. 9th ed.
 BRADIS, V. M. *Chetyrekhznachnye matematicheskie tablitsy* (Four-place mathematical tables). For grades 8-10. 29th ed.

Physics:

- PERYSHKIN, A. V. and others. *Kurs fiziki* (A course in physics). Part 1. For grade 8. 5th ed.

- ZNAMENSKII, P. A. *Sbornik zadach i uprazhnenii po fizike* (Manual of problems and exercises in physics). For grades 8-10. 10th ed.

Mechanical drawing:

- ABRIKOSOV, A. A. *Cherchenie* (Mechanical drawing). Part 2. For grades 8-10. 4th ed.

Anatomy and physiology:

- GARIB'IAN, R. B. and others. *Anatomiia i fiziologiia cheloveka* (Anatomy and physiology of man). For grade 8. 3d ed.

Chemistry:

- KHODAKOV, IU. V., SHAPOVALENKO, S. I. and others. *Khimiia* (chemistry). For grades 8-10. 4th ed.
 GOL'DFARB, IA. L. and SMORGONSKII, L. M. *Sbornik zadach i uprazhnenii po khimii* (Manual of problems and exercises in chemistry). For grades 8-10. 19th ed.

Geography:

- MAMAEV, I. I. *Ekonomicheskaiia geografiia zarubezhnykh stran* (Economic geography of foreign countries). For grade 8. 3d ed.

History:

- EFIMOV, A. V. *Novaia istoriia* (Modern History). Part 1. For grade 8. 17th ed.
 BUSHCHIK, A. P. *Istoriia SSSR* (History of the U.S.S.R.). Part 1. For grade 8. 3d ed.

Foreign languages:

- BELOVA, E. V. and TODD, L. R. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 8. 8th ed.
 GRUZINSKAIA, I. A. and CHERKASSKAIA, E. B. *Grammatika angliiskogo iazyka dlia starshikh klassov* (English grammar for the upper grades). Grades 8-10. 18th ed.
 BAKHAREVA, M. A. and others. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 8. 9th ed.
 SYREISHCHIKOVA, A. A. *Kratkii grammaticheskii spravochnik frantsuzskogo iazyka* (Brief French grammar manual). For grades 8-10. 14th ed.
 BERGMAN, N. A. and GIL'NER, A. IU. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 8. 9th ed.
 BERGMAN, N. A. and NATANZON, M. D. *Grammatika nemetskogo iazyka* (German grammar). For grades 8-10. 9th ed.

Practical exercises:

- SHCHERBAKOV, M. I. and others. *Praktikum po osnovam rastenievodstva i sel'skokhoziaistvennogo mashinovedeniia* (Practical training in the fundamentals of plant culture and of the operation and maintenance of agricultural machinery). For grades 8-10 of rural schools. 2d ed.
 LAPIN, M. M. *Osnovy rastenievodstva* (Fundamentals of plant culture). Textbook for grade 8 of rural schools. 2d ed.
 ELENEV, A. V. and others. *Osnovy mekhanizatsii sel'skogo khoziaistva* (Fundamentals of the mechanization of agriculture). Study aid for grades 8-10. 3d ed.
 BESPALKO, V. P. *Rukovodstvo po mashinovedeniiu* (Handbook on the operation and maintenance of machinery). Part 1. Study aid for grade 8. 2d ed.

GRADE IX

Literature:

- ZERCHANINOV, A. A. and others. *Russkaia literatura* (Russian literature). For grade 9. 17th ed.
 CHERNYSHEVSKII, N. G. *Chto delat'?* (What is to be done?). ("Biblioteka shkol'nika"). Study aid for grade 9.
 GONCHAROV, I. A. *Oblomov*. ("Biblioteka shkol'nika"). Study aid for grade 9.
 OSTROVSKII, A. N. *Groza* (The storm). ("Biblioteka shkol'nika"). Study aid for grade 9.

CHEKHOV, A. P. *Vishnevyy sad* (The cherry orchard). *Rasskazy* (Short stories). ("Biblioteka shkol'nika"). Study aid for grade 9.

TOLSTOI, L. N. *Voina i mir* (War and peace). Vols. I and II. ("Biblioteka shkol'nika"). Study aid for grade 9.

TOLSTOI, L. N. *Voina i mir* (Idem.) Vols. III and IV. ("Biblioteka shkol'nika"). Study aid for grade 9.

Mathematics:

KISELEV, A. P. *Geometriia* (Geometry). Part 2. For grades 9-10. 20th ed.

RYBKIN, N. A. *Sbornik zadach po geometrii* (Manual of problems in geometry). Part 2. For grades 9-10. 25th ed.

NOVOSELOV, S. I. *Trigonometriia* (Trigonometry). For grades 9-10. 3d ed.

STRATILATOV, P. V. *Sbornik zadach po trigonometrii* (Manual of problems in trigonometry). For grades 9-10. 2d ed.

Physics:

PERYSHKIN, A. V. and others. *Kurs fiziki* (A course in physics). Part 2. For grades 9-10. 5th ed.

Biology:

VESELOV, E. A. *Osnovy obshchei biologii* (Fundamentals of general biology). For grade 9. 2d ed.

Geography:

LIALIKOV, N. I. *Ekonomicheskaya geografiia SSSR* (Economic geography of the U.S.S.R.). For grade 9. 2d ed.

History:

GALKIN, I. S., KHVOSTOV, V. M. and others. *Novaia istoriia* (Modern history). Part 2. For grade 9. 13th ed.

Istoriia SSSR (History of the U.S.S.R.). Part 2. Under the editorship of PANKRATOVA, A. M. For grade 9. 17th ed.

Foreign languages:

BELOVA, E. V. and TODD, L. R. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 9. 8th ed.

BAKHAREVA, M. A. and TSETLIN, N. T. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 9. 8th ed.

POLOGILOV, K. M. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 9. 8th ed.

Practical exercises:

ESAULOV, P. A. and others. *Osnovy zhivotnovodstva* (Fundamentals of animal husbandry). Study aid for grade 9 of rural schools. 3d ed.

STAVROVSKII, A. E. *Praktikum po osnovam zhivotnovodstva* (Practical training in the fundamentals of animal husbandry). Handbook for grade 9 of rural schools. 3d ed.

BESPALKO, V. P. *Rukovodstvo po mashinovedeniiu* (Hand-

book on the operation and maintenance of machinery). Part 2. *Avtomobil'* (The automobile). Study aid for grade 9. 2d ed.

SHANTYR', M. V. *Rukovodstvo po mashinovedeniiu* (Handbook on the operation and maintenance of machinery). (*Traktor*) (Tractor). Study aid for grade 9. 2d ed.

GRADE X

Literature:

DEMENT'EV, A. G. and others. *Russkaia sovetskaya literatura* (Russian Soviet literature). For grade 10. 7th ed.

GOR'KII, M. V. *I. Lenin, Mat', Na dne, Starukha Izergil'* (V. I. Lenin, Mother, In the depths, Old woman Izergil'). ("Biblioteka shkol'nika").

MAIAKOVSKII, V. *Stikhi i poemy* (Verses and poems). 3d ed., ("Biblioteka shkol'nika").

OSTROVSKII, N. *Kak zakalialas' stal'* (How the steel was tempered). ("Biblioteka shkol'nika").

FADEEV, A. *Molodaia gvardiia* (The young guard). ("Biblioteka shkol'nika").

SHOLOKHOV, M. *Podniataia tselina* (The Virgin Soil Up-rooted). Novel. Book I. 3d ed., ("Biblioteka shkol'nika").

Literatura narodov SSSR (Literature of the peoples of the U.S.S.R.). *Sbornik*. (An anthology). Compiled by KLIMOVICH, L. I. For grade 10. 5th ed.

Physics:

PERYSHKIN, A. V. and others. *Kurs fiziki* (A course in physics). Part 3. For grade 10. 5th ed.

Astronomy:

VORONTSOV-VEL'AMINOV, B. A. *Astronomiia* (Astronomy). For grade 10. 5th ed.

History:

Istoriia SSSR (History of the U.S.S.R.). Part 3. Under the editorship of PANKRATOVA, M. A. For grade 10. 17th ed.

Foreign Languages:

NELIDOVA, I. A. and TODD, L. R. *Uchebnik angliiskogo iazyka* (Textbook of English). For grade 10. 7th ed.

LOBANOVA, L. G. and others. *Uchebnik frantsuzskogo iazyka* (Textbook of French). For grade 10. 7th ed.

POGODILOV, K. M. and RAKHMANOV, I. V. *Uchebnik nemetskogo iazyka* (Textbook of German). For grade 10. 18th ed.

Practical exercises:

MEMRUK, A. F. *Praktikum po elektrotekhnike* (Practical training in electrical engineering). For grade 10. 2d ed.

Note: With the exception of textbooks for the new subjects introduced in the curriculum in 1955-57, these textbooks were used with the 1952, 1955 and 1957 curricula presented in this appendix.

[illegible]

TABLE II-D-5.—*Distribution of intermediate (5-7) and upper (8-10) grade teachers by subject matter and education in 1958-59*

Subject matter of teacher	Grades 5-7					Grades 8-10					Total	
	Total (thou- sands)	Per- cent	By education in percent			Total (thou- sands)	Per- cent	By education in percent			Thou- sands	Per- cent
			HE ¹	TI ²	Other			HE ¹	TI ²	Other		
Language and literature.....	259.0	43.2	.....	.....	.....	101.0	33.5	.....	.....	.....	360.0	40.0
Russian language and literature, total.....	145.0	24.2	.....	.....	.....	52.0	17.3	.....	.....	.....	197.0	21.8
In schools with Russian language of instruction.....	98.0	16.4	37.7	56.2	6.1	34.0	11.3	90.0	9.5	0.5	132.0	14.6
In schools with non-Russian language of instruction.....	47.0	7.8	27.6	52.8	19.6	18.0	6.0	81.1	15.6	3.1	65.0	7.2
Native (non-Russian) language and literature.....	61.0	10.1	35.0	55.3	9.7	20.0	6.6	86.2	12.5	1.3	81.0	9.1
English.....	16.0	2.7	72.7	18.4	8.9	10.0	3.3	91.4	7.3	1.3	26.0	2.9
German.....	33.0	5.5	31.0	30.7	38.3	16.0	5.3	72.6	18.3	9.1	49.0	5.4
French.....	4.0	0.7	86.0	22.0	10.0	3.0	1.0	89.8	8.5	1.7	7.0	0.8
History.....	68.0	11.4	42.1	50.6	7.3	45.0	15.0	89.8	9.7	0.5	113.0	12.6
Geography.....	39.0	6.6	52.8	38.5	8.7	18.0	6.0	87.9	11.2	0.9	57.0	6.3
Geography and natural sciences combined ^a	29.0	4.8	17.2	70.4	12.4	4.0	1.3	64.1	33.1	2.8	33.0	3.7
Sciences and mathematics.....	204.0	34.0	.....	.....	.....	133.0	44.2	.....	.....	.....	337.0	37.4
Natural sciences ^a	45.0	7.5	36.5	50.7	12.8	15.0	5.0	81.8	16.5	1.7	60.0	6.7
Chemistry.....	11.0	1.8	48.0	42.2	9.8	26.0	8.6	92.1	7.3	0.6	37.0	4.1
Physics (only).....	16.0	2.7	41.7	45.2	13.1	30.0	10.0	87.8	11.2	1.0	46.0	5.1
Physics and math combined.....	54.0	9.0	16.7	69.2	14.1	16.0	5.3	72.9	25.4	1.7	70.0	7.8
Mathematics (only).....	78.0	13.0	28.5	56.5	15.0	46.0	15.3	85.3	13.8	0.9	124.0	13.7
Total.....	599.0	100.0	.....	.....	.....	301.0	100.0	.....	.....	.....	900.0	100.0

^a General science includes "nature studies" (*estestvoznaniye*), botany, zoology, biology, human anatomy.

¹ Higher education.

² Teacher institute education.
Source: *Nar Khoz-1959*, p. 819.

TABLE II-F-1.—*Number of Soviet primary and secondary schools, by type of school, 1914, 1922–59*
(All figures in thousands)

Year end	Grand total, primary and secondary schools	"Regular" total	Elementary schools with grades 1–4 only	7-year with grades 1–7 only	10-year with grades 1–10	Other
	A	B	C	D	E	F
1914 ^a	123.7	123.7	119.4	2.0	2.3	.....
1914 ^b	105.5	105.5	101.9	1.6	2.0	0.0
1922.....		88.6	82.6	3.5	2.5	(*)
1923.....		91.8	85.7	4.0	2.0	0.1
1924.....		93.6	87.6	4.0	1.8	0.2
1925.....		103.3	96.4	4.8	1.6	0.4
1926.....		111.0	102.7	5.7	1.7	0.9
1927.....	120.1	118.6	108.8	6.6	1.8	1.4
1928.....		124.8	114.4	7.1	1.9	1.5
1929.....		133.2	121.7	7.8	1.9	1.8
1930.....		152.8	136.0	12.4	0.6	3.8
1931.....		168.1	139.2	21.8	(*)	7.1
1932.....		166.3	136.2	26.7	1.3	2.1
1933.....		166.5	133.9	28.6	2.4	1.5
1934.....		163.1	127.9	30.0	4.1	1.1
1935.....		164.1	125.7	31.5	6.0	0.9
1936.....		164.8	122.6	33.0	8.1	1.1
1937.....		168.4	122.1	34.2	9.9	2.2
1938.....		171.6	121.7	36.3	12.5	1.1
1939.....		172.8	116.7	39.2	15.8	1.0
1940.....	198.8	191.5	125.9	45.7	18.8	1.1
1945.....		186.8	131.6	41.7	12.8	0.7
1946.....		193.2	136.9	42.9	12.9	0.5
1947.....		197.2	139.7	44.1	12.9	0.5
1948.....		199.3	139.1	46.7	13.0	0.5
1949.....		201.0	132.1	54.9	13.6	0.5
1950.....	222.1	201.6	126.4	59.6	15.0	0.6
1951.....		200.2	120.6	61.5	17.4	0.7
1952.....		198.3	115.8	62.0	19.7	0.7
1953.....	213.0	197.0	112.1	61.8	22.3	0.8
1954.....		197.7	111.1	60.4	25.2	0.9
1955.....		195.3	108.8	58.7	26.9	0.9
1956.....		196.6	110.3	57.1	28.3	0.9
1957.....	214.2	198.5	111.9	55.9	29.8	0.9
1958.....	215.2	199.7	112.4	55.7	30.7	0.9
1959.....	220.5	199.3	111.5	56.6	30.2	1.0

^a Contemporary boundaries of the U.S.S.R. including post-war annexations.

^b U.S.S.R. boundaries prior to September 1939.

^c Negligible.

SOURCES AND NOTES TO TABLE II-F-1

Designation of columns is as follows

- A.—All types of primary and secondary schools, including those for adults, working and rural youth.
 B.—Total number of schools of "regular" type, including those for the physically handicapped and retarded children.
 C.—Elementary schools with Grades 1–4 only.
 D.—Intermediate 7-year schools with grades 1–7.
 E.—Complete primary-secondary schools with grades 1–10.
 F.—Schools for physically handicapped children.

Sources

- Col. A, 1914, 1940–50, 1953, 1957, 1958.—*NarKhoz-1959*, pp. 90, 808–9.
 Cols. B, C, D, E, F, 1922–38.—*Kul't Stroi-1940*, p. 27.
 Cols. B, C, D, E, F, 1939–40, 1945–55.—*KS-1956*, p. 80.
 Cols. B, C, D, E, F, 1914a, b; 1922–27, 1932, 1937, 1940–50, 1953, 1955–58.—*NarKhoz-1959*, pp. 812–13.
 Cols. A B, 1959.—*SSSR-Tsil-1959*, p. 206.
 Cols. A–F, 1959.—*NarKhoz-1960*, pp. 727, 729.

or a certificate stating the subjects studied in the higher military institution.

XX. All problems in connection with admission to higher educational establishments are handled by a committee on admissions which operates in accordance with the rules of admission and its decisions are final.

XXI. Persons admitted as students to higher educational establishments but who fail to enroll without valid reason within 10 days after the beginning of the academic year are dismissed from the higher educational establishment.

TABLE IV-A-O.—Distribution by previous preparation of entrants into Soviet higher educational establishments in the fall of a given year

Previous Preparation of entrants	(A) 1926	(B) 1927	(C) 1933	(D) 1934	(E) 1935	(F) 1938	(G) 1945
Graduates from secondary school.....	52.0	39.2	13.3	14.6	16.5	458.8	80.0
Rabfak preparatory (workers' faculty).....	26.8	25.2	43.5	40.0	38.4	22.9	None
Technicians.....	17.7	9.8	17.7	16.5	13.4	12.9	5.0
Other (courses, self-preparatory, other VUZ).....	3.5	25.8	25.5	28.9	31.7	5.4	15.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Includes graduates of 2d-level schools (*shkoly vtoroi stupeni*) and 9-year schools (*deviatiletki*).

^b Includes 6.3 percent of FZO graduates, 8 percent military-school graduates, and 11.5 percent "other" self-preparatory.

^c In engineering fields, 20.8 percent were regular secondary-school graduates.

^d In engineering fields, 71.2 percent were regular secondary-school graduates.

SOURCES AND NOTES

Columns (A), (G).—Bartosek, *Vysoké*, p. 26. Until 1934 the majority of secondary school graduates had a 9-year primary and secondary education.

Column (B).—BSE (1st ed.), 1929, vol. 14, col. 33.

Columns (C), (D), (E).—*Kul't Stroi-1935*, p. 93; also Bartosek, *Vysoké*, p. 28.

Column (F).—*Kul't Stroi-1940*, p. 127; *Kul't Stroi-1935*, p. 93; also Bartosek, *Vysoké*, p. 28.

TABLE IV-A-I-S.—Aggregate acceptances, enrollment in and graduations from Soviet higher educational establishments by type of program of study in selected years, 1914-59
[Figures rounded in thousands]

	1914	1927	1932	1940	1950	1953	1955	1956	1957	1958	1959
ACCEPTANCES											
Total.....		42.8	245.8	263.4	349.1	430.8	461.4	458.7	438.3	455.9	511.7
Regular day.....		{ 42.8	{ 245.8	154.9	228.4	265.1	257.2	231.2	219.7	215.5	227.1
Evening.....				6.6	9.1	16.6	28.4	32.6	34.7	42.2	63.5
Extension.....		(^a)	(^a)	101.9	111.6	149.1	175.8	194.9	183.9	198.2	221.1
ENROLLMENT											
Total.....	127.0	169.0	504.0	812.0	1,247.0	1,562.0	1,867.0	2,001.0	2,099.0	179.0	2,267.0
Regular Day...	127.0	{ 169.0	{ 504.0	558.0	818.0	995.0	1,147.0	1,177.0	1,193.0	180.0	1,146.0
Evening.....	(^a)			27.0	27.0	48.0	81.0	101.0	127.0	153.0	196.0
Extension.....	(^a)	(^a)	(^a)	227.0	402.0	519.0	639.0	723.0	779.0	846.0	925.0
GRADUATIONS											
Total.....		28.7	43.2	126.1	176.9	220.2	245.8	259.9	266.5	290.7	338.0
Regular Day...		{ 28.7	{ 43.2	97.8	145.9	168.7	179.2	185.3	186.8	205.2	240.5
Evening.....				4.4	2.0	3.3	4.6	5.7	7.2	8.7	13.2
Extension.....		(^a)	(^a)	23.9	29.0	48.2	62.0	68.9	72.5	76.8	84.3

^a None

Sources and Notes: *Narkhoz-1959*, pp. 830, 835, 837; *Narkhoz-1960*, pp. 740, 745, 748. Prior to 1938 extension-correspondence

students were not counted as students but as attendants of training courses. Until 1958 the reporting of "regular" students meant aggregate students in day and evening divisions ("*statsionarnye*").

TABLE IV-A-5.—Relative proportion of women among regular full-time students in Soviet higher educational establishments, 1926–37, 1940, 1950, 1955–59

[Percent of women enrolled in higher educational establishments by field at the end of a given calendar year]

	x	a	b	c	d	e	f	g	h	i	j	k	l Average, 1927–37	m	n	o	p	q	r	s
	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1927–37	1940	1950	1955	1956	1957	1958	1959
1. Engineering-Industrial..	7.2	13.4	14.3	15.6	15.5	*17.7	19.8	22.4	23.3	25.6	26.6	28.0	20.2	40.3	30.3	35.4	36.0	33.0	32.0	31.0
2. Agricultural..	16.3	17.4	18.4	20.4	25.4	*28.1	30.6	32.1	31.8	30.2	29.3	30.2	26.7	46.1	39.3	39.3	39.0	34.0	31.0	26.0
3. Socioeconomic..	16.5	21.1	22.4	19.4	24.8	*29.8	34.9	36.0	39.0	40.1	39.7	41.3	31.7	63.6	57.0	67.0	70.0	66.0	65.0	63.0
4. Education..	48.0	48.7	*49.0	*46.7	44.4	*46.9	49.3	50.2	48.4	46.8	47.4	48.2	47.8	66.5	71.9	72.1	69.0	65.0	62.0	59.0
5. Health..	52.0	52.0	*54.0	*56.0	58.0	*64.7	71.4	75.1	71.2	69.0	68.8	67.5	64.3	74.1	64.9	69.2	69.0	65.0	62.0	59.0
6. All fields.....	30.9	28.5	29.1	29.2	28.3	*30.8	33.3	36.5	38.0	39.5	41.0	43.1	34.3	58.0	53.1	52.3	51.0	49.0	47.0	45.0

*Figures obtained by interpolation.

SOURCES AND NOTES

Table Code Sources and Discussion
 I-6, a,d,i,g.—Beilin, Kadry, p. 367; also Sots Stroi-1935, p. 617; SC-Eng-1936, p. 457; Sots Stroi-1934, p. 410.
 I-6h.—SC-Eng-1936, p. 457; also Sots Stroi-1936, p. 576.

I-6k.—Sots Stroi-1933-38, p. 124.
 I-6a,g,h,i,j,k.—Kul't Stroi-1940, p. 118.
 I-3, 6b,c.—Plan Kadrov-1930, p. 127.

4c.—By averaging 5a and 5d.

5c.—By averaging 6a and 6d.

4, 5b.—By averaging, and by 2 percentage points upward adjustment in order to reflect the general upward trend.

I-6e.—Derived by averaging (d) and (f) for each field. Some justification for this procedure is implied in the statement in *Itoigi Peruogo FYP*, p. 175, which reveals that in 1932 the relative proportion of women in the industrial branch "increased up to 18 percent" (thus 1e is 18 percent as against 17.7 derived by interpolation in the table).

I-6x.—Plan Kadrov-1930, p. 127.

I-6, m,n,o.—NKKh-1957, p. 253; *Vestnik statistiki*, 1956, No. 6, p. 96; K5-1956, p. 205. The first two sources state the absolute number of women students in the respective years on the basis of which the percentages were recomputed and incorporated in this table. This was done also as a check, for all these sources

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report also the approximate percent of women students in regular higher educational establishments.

I-6p.—Dos-1957, p. 282. The source does not state explicitly that the reported percent of women students refers to regular enrollment only. The data for 1940 and 1950 can be compared with that reported in other sources, which reveal that the percentages stated should refer to women among regular students only.

I-6q.—SSSR-Tsif-1958, p. 360.

I-6r.—Narkhoz-1959, p. 840.

I-6s.—Narkhoz-1960, p. 751.

It must be noted in general that the averaging procedure in (b) and (c) columns does not lead to any appreciable error. However, in 1932, when the enrollment rose tremendously, it is conceivable that the share of women also greatly increased. So far the only justification of the method employed was found in *Itoigi Peruogo FYP*, p. 175. The suppression of 1932 statistics in all publications of later years is extremely conspicuous.

Column 1: "Average 1928–38" represents an unweighted average and is derived by averaging yearly percentages of relative share of women for the period in question.

TABLE IV-A-6.—Composition by social origin of students in Soviet higher educational establishments, 1927–38

[In percent at the beginning of a given year]

	(a) 1927	(b) 1928	(c) 1929	(d) 1930	(e) 1931	(f) 1932	(g) 1933	(h) 1934	(i) 1935	(j) 1938	Average, 1927–38	Averag- ing error	1937–38 adjusted average
1. Industrial:													
Worker.....	40.0	38.3	46.4	60.0	61.9	.....	64.6	62.2	59.8	43.5	52.9	.....	53.0
Peasant.....	.....	14.6	12.8	.....	11.3	.....	7.8	7.1	.....	9.6	10.5	.....	10.4
Other.....	.....	47.1	40.8	.....	26.8	.....	27.2	30.7	.....	53.1	36.7	+0.1	36.6
2. Agricultural:													
Worker.....	.....	18.2	23.0	.....	33.0	.....	37.1	36.4	37.1	30.5	30.8	.....	30.8
Peasant.....	.....	44.4	35.0	.....	34.8	.....	34.4	29.3	.....	36.7	35.7	.....	35.7
Other.....	.....	37.4	42.0	.....	32.2	.....	28.5	34.3	.....	32.8	34.5	+1.0	33.5
3. Socioeconomic													
Worker.....	.....	34.2	38.0	.....	41.6	.....	46.0	46.5	44.1	39.2	41.4	.....	41.4
Peasant.....	.....	23.1	.....	.....	22.7	.....	19.2	15.8	.....	24.9	21.1	.....	21.1
Other.....	.....	43.7	.....	.....	35.7	.....	34.8	37.7	.....	35.9	37.6	+0.1	37.5
4. Education													
Worker.....	.....	16.3	.....	.....	28.8	.....	29.8	28.1	26.9	23.9	25.6	.....	25.6
Peasant.....	.....	27.8	.....	.....	24.1	.....	24.9	20.3	.....	30.3	25.5	.....	25.5
Other.....	.....	55.9	.....	.....	47.1	.....	45.3	51.6	.....	45.8	49.1	+0.2	48.9
5. Health													
Worker.....	.....	17.0	.....	.....	35.0	.....	40.9	38.5	37.1	33.6	33.7	.....	33.7
Peasant.....	.....	14.8	.....	.....	19.9	.....	21.3	18.6	.....	17.6	18.4	.....	18.4
Other.....	.....	66.2	.....	.....	45.1	.....	37.8	42.9	.....	48.8	48.1	+0.2	47.9
6. All fields:													
Worker.....	24.2	25.4	30.3	35.2	46.4	58.0	50.3	47.9	45.0	33.9	39.7	.....	39.7
Peasant.....	23.3	23.9	22.4	20.9	19.3	14.1	16.9	14.6	16.2	21.6	19.3	.....	19.3
Other.....	52.5	50.7	47.3	43.9	34.3	27.9	32.8	37.5	38.8	44.5	41.0	0.0	41.0

Worker: Workers and their children.
 Peasant: Peasants and their children.

Other: Intelligentsia, white-collar workers, proprietors and their children.

NOTES AND SOURCES

Place in Table Sources and Discussion

(1-6) (wpo) b,e,g.—Sots Stroi-1934, p. 411.

(1-6) (wpo) b.—Podgotovka, p. 19.

(1-6) (wpo) l.—Kul't Stroi-1940, p. 114.

(1-6) (w) i.—Sots Stroi-1936, p. 576.

6 (wpo) i.—Bartosek, Vysoké, p. 24.

1 (wp) l.—Sots Stroi-1933-38, p. 126. This source gives the

percentage for workers and peasants combined as 53.0 percent, as against the accepted 53.1 percent. Reference is made to heavy industry engineering schools only.

6 (wpo) f.—Podgotovka, p. 19.

4 (wp) l.—Sots Stroi-1933-38, p. 126, states that for Soviet universities only workers and peasants combined comprised 50.2 percent of the students.

(1-6) (wpo) b, e, g, h.—Beilin, Kadry, p. 311.

1 (w) a, d.—Plan Kadrov-1930, p. 124.

1 (wpo) c.—Podgotovka, p. 19.

Place in Table Sources and Discussion

2 (wp) c.—Plan Kadrov-1930, p. 125.

3 (w) c.—Plan Kadrov-1930, p. 126.

6 (wp) a, b, c, d.—Narkhoz-1932, p. 535.

1927–1938 average.—1927–38 average is derived from available data for individual years. This procedure of averaging resulted in an error because of incomplete reporting and some lack of precision in official reporting of this type of data. 1927–38 adjusted average was obtained essentially for statistical purposes in carrying out estimates presented elsewhere in this volume so that the distribution would total 100 percent. Adjustment was made to benefit worker and peasant categories. Thus, when each row was averaged separately, the three categories combined totaled to more than 100 percent in the 1927–38 unadjusted average. The averaging error was then subtracted from "other" category to obtain adjusted average for 1927–38.

TABLE IV-A-7.—*Composition of regular students by nationality in Soviet higher educational establishments, 1927, 1929-35, 1950, 1956-59*

[In percent of total regular (full-time) enrollment in all fields]

Nationality	a U.S.S.R. national composition (1926 census)	b 1927	c 1929	d 1930	e 1933	f 1934	g 1935	h 1929 -35 average	i 1950	j 1956	k 1957	l 1958	m 1959
1. Russians.....	52.9	56.1	56.1	53.2	53.5	56.0	54.4	54.6	60.8	62.1	62.2	61.9	62.3
2. Ukrainians.....	21.2	14.6	14.6	17.8	16.1	15.5	14.3	15.7	12.7	13.9	13.8	13.8	13.3
3. Belorussians.....	3.2	2.9	2.9	2.6	3.3	2.7	3.0	2.9	2.0	2.7	2.7	2.7	2.5
4. Kazakhs.....	2.7	0.2	0.2	0.3	0.5	0.3	0.4	0.3	1.2	1.2	2.0	2.2	2.4
5. Uzbeks.....	2.7	0.3	0.3	0.4	0.7	0.9	0.5	0.6	1.5	1.9	1.3	1.5	1.6
6. Georgians.....	1.2	2.4	2.4	4.3	2.9	2.7	3.5	3.2	2.6	1.8	1.7	1.7	1.7
7. Azerbaidzhans (Turks).....	1.2	1.1	1.1	1.4	1.4	1.5	1.3	1.3	1.6	1.4	1.3	1.4	1.3
8. Armenians.....	1.1	2.0	2.0	2.4	2.3	2.0	2.3	2.2	2.2	1.7	1.1	1.2	1.2
9. Moldavs.....		0.1							0.2	0.4	0.4	0.4	0.5
10. Latvians.....	(ⁿ)	(ⁿ)							0.9	0.7	0.7	0.7	0.7
11. Lithuanians.....	(ⁿ)	(ⁿ)							1.0	1.1	0.4	0.4	0.5
12. Tadzhiks.....	0.7	0.06	0.05	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.5	0.5	0.5
13. Kirgiz.....	0.5	0.06					0.1		0.4	0.4	1.7	1.6	1.5
14. Turkomen.....	0.5	0.06	0.05	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.4	0.4
15. Estonians.....	(ⁿ)	(ⁿ)							0.8	0.6	0.6	0.6	0.6
Accounted total...	87.9	79.9	79.7	82.6	80.9	81.8	80.0	81.0	88.5	90.7	90.9	91.0	91.0
Other nationalities, total.....	12.1	20.1	20.3	17.4	19.1	18.2	20.0	19.0	11.5	9.3	9.1	9.0	9.0
of which:													
Jews.....	1.8		13.5	11.3	12.8	12.2	13.3	12.4					
Tatars.....	2.0		0.8	0.9	1.3	1.4	1.3	1.3					
Germans.....	0.8		0.5	0.6	0.7	0.5	0.7	0.6					
Chuvashes.....	0.8		0.5	0.4	0.4	0.5	0.5	0.4					
Bashkirs.....	0.5		0.1	0.1	0.2	0.2	0.2	0.2					
Poles.....	0.5		0.6	0.8	0.8	0.8	0.7	0.8					
Mordvins.....	0.9		0.2	0.2	0.2	0.3	0.3	0.2					
All others.....	4.8		4.1	3.1	2.7	2.3	3.0	3.1					
Regular enrollment (thous.).....		168	204	288	458	527	563		845	1,278	1,320	1,333	1,342

SOURCES AND NOTES

Column in Table Sources and Discussion
c,e,g.—Sots Stroi—1936, p. 576 (data as of Jan. 1)
a,c,d,f.—Sots Stroi—1934, p. 411. Column *a* also in Lorimer,
The Population of the Soviet Union, pp. 55-61.
c,e,f.—Sots Stroi—1935, p. 617. This source actually reveals that
(e) is as of Jan. 1, 1933, while *(f)* is of Nov. 1, 1933. Thus
(f) actually represents year-entry 1934 figure. Same data
 presented in *SC-Eng-1936*, p. 457.
h.—Unweighted average for the 1929-35 period.
b,i,j.—*Dos-1957*, p. 283. Percentage distribution was computed
 by the author on the basis of the absolute figures reported
 in this source. The definition of nationality contains the
 wording "po korennyim natsional'nostiam soizuznykh res-
 publik" (by root nationality of the union republics). The
 numbers 1-15 in the table indeed refer to the nationalities
 of each of the fifteen union republics which comprised the
 U.S.S.R., as of 1957.
k,l.—*SSSR-Tsif-1958*, p. 361; *NarKhoz-1959*, p. 841. See Sup-
 plement to Table IV-A-7.
m.—*NarKhoz-1960*, p. 752.

Definition of nationality in Table IV-A-7, col. *a*, *c-h*,
 refers to the concept of root nationality. This concept was
 reported abolished in the mid-1930's. From that time until
 1957 Soviet sources refrained from publishing statistics of
 this type and statistics on the geographic distribution of

enrollment displaced them. Geographic distribution, however,
 does not reveal which nationality the students actually are,
 since national minorities might attend institutions located
 in other localities outside the territorial boundaries of a given
 union republic. Also some Russians or other nationalities
 might attend institutions located in the territory of other
 national republics.

It is known from statistical reporting forms, however, that
 the nationality of students continued to be reported to cen-
 tral statistical organs. The concept of "root nationality" may
 have changed and the "declared (in student identification
 papers—passport) nationality was being used instead. To the
 great surprise of Western observers, in 1957 Soviet authorities
 decided to release tabulations of regular student enrollment
 by nationality, but they referred only to the nationalities
 which were called the "root nationalities of the union re-
 public." An extensive check with a number of statistical
 handbooks for localities, regions and republics revealed that
 the figures thus reported definitely refer to national, rather
 than geographic criteria. Apparently the unaccounted resid-
 ual refers, therefore, to all other nationalities of the Soviet
 Union (besides those for which the fifteen union republics
 are named).

n—None or negligible (not part of U.S.S.R. in pre-World
 War II boundaries.)

SUPPLEMENT TO TABLE IV-A-7.—National composition of students enrolled in Soviet higher educational establishments, selected years, 1927–59

[In thousands and percent]

Nationality	1927		1950		1956		1956, RSFSR ^b		1957		1958		1959	
	Thou-sands	Per-cent	Thou-sands	Per-cent	Thou-sands	Per-cent	Thou-sands	Per-cent	Thou-sands	Per-cent	Thou-sands	Per-cent	Thou-sands	Per-cent
Russians.....	94.5	56.1	514.1	60.8	792.1	62.1	1054.7	83.3	823.2	62.2	824.9	61.9	835.3	62.3
Ukrainians.....	24.6	14.8	107.2	12.7	176.6	13.9	57.8	4.5	182.1	13.8	183.6	13.8	179.6	13.3
Belorussians.....	4.9	2.9	17.2	2.0	34.5	2.7	12.2	1.0	35.1	2.7	35.4	2.7	33.8	2.5
Uzbeks.....	0.5	0.3	12.5	1.5	24.7	1.9	1.3	0.1	26.3	2.0	28.9	2.2	30.5	2.4
Kazakhs.....	0.3	0.2	9.9	1.2	16.0	1.2	2.2	0.2	17.5	1.3	19.7	1.5	22.0	1.6
Georgians.....	4.0	2.4	21.8	2.6	22.9	1.8	2.9	0.2	22.2	1.7	23.1	1.7	23.7	1.7
Azerbaijani.....	1.9	1.1	13.4	1.6	17.4	1.4	1.1	0.1	16.6	1.3	18.3	1.4	17.7	1.3
Lithuanians.....	.....	.....	8.6	1.0	14.2	1.1	2.0	0.2	15.1	1.1	15.5	1.2	15.8	1.2
Moldavs.....	0.2	0.1	1.6	0.2	5.5	0.4	0.8	0.1	5.9	0.4	6.0	0.4	6.6	0.5
Latvians.....	.....	.....	8.1	0.9	9.1	0.7	2.6	0.2	9.4	0.7	9.6	0.7	9.8	0.7
Kirgiz.....	0.1	0.06	3.1	0.4	5.2	0.4	0.7	0.06	5.4	0.4	5.8	0.4	6.5	0.5
Tadzhiks.....	0.1	0.06	2.3	0.3	5.8	0.4	0.4	0.03	6.4	0.5	6.7	0.5	6.8	0.5
Armenians.....	3.4	2.0	18.7	2.2	22.1	1.7	7.3	0.6	22.0	1.7	21.2	1.6	20.4	1.5
Turkmen.....	0.1	0.06	2.3	0.3	5.3	0.4	0.3	0.01	5.4	0.4	5.7	0.4	5.7	0.4
Estonians.....	.....	.....	7.0	0.8	7.7	0.6	1.4	0.1	7.5	0.6	7.4	0.6	7.5	0.6
Subtotal.....	134.6	79.9	747.8	88.5	1159.1	90.7	1147.7	90.7	1200.1	90.9	1211.8	91.0	1221.7	91.0
Other nationalities.....	33.9	20.1	97.3	11.5	118.8	9.3	119.0 ^a	9.3 ^a	120.2	9.1	121.2	9.0	119.9	9.0
Official total of regular (day and evening) students.....	168.5	100.0	845.1	100.0	1279.9	100.0	na	na	1320.3	100.0	1333.0	100.0	1341.6	100.0
Total enrollment.....	168.5	.....	1247.4	.....	2001.0	.....	1266.7	100.0	2099.1	.....	2178.9	.....	2267.0	.....

Sources and Notes: *Dos-1957*, p. 283; *NarKhoz-1959*, p. 841; *KS-RSFSR-1958*, p. 381; *NarKhoz-1960*, p. 752.

* "Other" Total 1956:

	Thousand	Percent
Jews.....	51.6	4.1
Karelo-Finns.....	1.2	0.1
Tatars.....	22.4	1.8
Bashkirs.....	4.2	0.3
Dagestan nationalities.....	4.4	0.3
Buriats.....	3.0	0.2
Kabardins.....	1.6	0.1

	Thousand	Percent
Komi.....	2.1	0.2
Mari.....	1.6	0.1
Mordvins.....	3.0	0.2
Ossets.....	3.5	0.2
Udmurts.....	2.8	0.3
Chuvash.....	6.2	0.5
Yakuts.....	2.1	0.2
All other (unspecified).....	9.3	0.7

^b Note that distribution of students in RSFSR is for total enrollment, while for the U.S.S.R. (all years) it is for regular students only.

APPENDIX IV-B-1.—Specialties (Spetsial'nosti) Offered in Soviet Higher Educational Establishments as of 1959

Introductory Note

In order to curtail fragmentary specialization and to introduce some orderly procedure for offering the existing and for introducing new specialties, the Ministry of Higher Education in the fall of 1954 decreed the establishment of definitions and descriptions of specialties. This appendix presents a listing of these specialties. They are arranged by branch and specialty groups. It was decreed in 1954 that thereafter new specialties could be offered by individual higher education institutions only after the approval of the Ministry of Higher Education. The number of specializations (*spetsializatsiia*) within specialties (*spetsial'nosti*) was reduced, but

their definitions were not spelled out by the decree. Apparently, as in the past, specializations are decided upon by individual higher education institutes upon the requests of employers of professional graduates.

The listing of the specialties below was compiled first from *VyShkoSPR-1957*, pp. 55–60, and then verified from other sources (particularly *Sprav VUZ-1958* and *Sprav VUZ-1959*). The original listing of specialties was established in accordance with the decree of the Minister of Higher Education of the U.S.S.R. as of September 9, 1954. Subsequent amendments were made as of February 15, April 18, May 13 and 31, August 15, 1955; and

GENERAL NOTE TO APPENDIX TABLES IV-C-1, IV-C-2 AND IV-C-3

Appendix Tables IV-C-1, IV-C-2 and IV-C-3 present data on the number of Soviet higher educational establishments as compiled from different Soviet sources. The aggregate number of Soviet higher educational establishments (Table IV-C-1) officially reported in Soviet statistical handbooks is a mystery, for we can never exhaust the grand total by summing up the various distributions of institutions of higher learning by field or specialty group (see definitions in text). Apparently the total independent number of higher educational establishments reported includes, in addition to regular (day) institutions, extension-correspondence institutes and independent evening branches of higher educational establishments. But even when the number of all these establishments is included, the sum still does not exhaust the officially reported total. One can only speculate about the institutions contained in the residual figure. What is worse, in one year (1947) the number of institutions identifiable by branch from the Soviet directory of higher educational establishments (*Sprav VUZ-1947*) exceeds the official reported total by 15 units.

Until 1947 the Soviet Government did not publish directories of its higher educational establishments. Until then Soviet higher educational establishments, grouped by branch and specialty field, had to be compiled from various sources. These compilations are summarized in Table IV-C-2. The totals (Cols. TR and GT in Table IV-C-2) derived from the sub-groups invariably diverge from the Soviet official total reported in Table IV-C-1. Omissions, or double-counting in the case of branch divisions, as well as the opening and consolidation of individual establishments, make the task of matching the two compilations seem like looking for the proverbial needle in the haystack.

Since 1947 Soviet authorities have published regular institutional directories (*Sprav VUZ . . .*), which identify each institution by location, street address, and list divisions and specialties offered therein. The 1959 directory was used as the basis for compiling Appendix IV-B-3, where Soviet data on divisions and specialties have been rearranged, re-coded (in decimal code of the specialties and roman numeral—letter code for divisions) and checked (for 1959 and the two preceding years) for specialty offerings. The Soviet institutional directories for 1947, 1954, 1955, 1958 and 1959 have all been processed in order to arrive at the tabulation of data in Appendix Table IV-C-3. Table IV-C-3 thus presents a compilation of Soviet higher educational establishments by branch and specialty group on the basis of individual and fully identifiable units. The compilation in Table IV-C-3, in the opinion of this researcher, is the most reliable (we are absolutely sure what goes into the total and each sub-grouping) guide to the number and distribution of Soviet higher education institutions by branch and specialty group compiled so far. In each year listings include all the regular (day) higher educational establishments and all independent extension-correspondence institutes. The independent evening branches of regular higher educational establishments, plus the evening and extension-correspondence divisions of regular (day) institutions, are not included.

Finally, although on occasion speculation was made (because of the frequently encountered discrepancies) that Soviet official totals might include some higher educational establishments of the military establishment and of the Communist Party, this could not be verified. The compilation in Table IV-C-3 certainly excludes military academies (though military training "special divisions" of regular higher educational establishments and the enigmatic "Mechanical Institute" are automatically counted) and also excludes higher educational establishments of the Communist Party. The persistent search for institutions which are counted, and where, is exceedingly important, for it has direct relevance to Soviet reporting of enrollments and graduations by branch and specialty group, a reporting which is often based on institutional grouping. The implication of the institutional data in Table IV-C-3 is thus such that the reporting of professional graduates by Soviet higher educational establishments in all probability excludes persons trained in the military and party schools offering higher education certification.

TABLE IV-C-1.—Official reporting of the total number of Soviet higher educational establishments, 1914, 1920-59

Year end	Number of institutions	Year end	Number of institutions
1914(a).....	105	1940.....	817
1914(b).....	91	1941.....	.....
		1942.....	.....
1922.....	248	1943.....	.....
1923.....	187	1944.....	.....
1924.....	169	1945.....	789
1925.....	145	1946.....	805
1926.....	148	1947.....	807
1927.....	148	1948.....	823
1928.....	152	1949.....	864
1929.....	190		
		1950.....	880
1930.....	579	1951.....	887
1931.....	701	1952.....	827
1932.....	832	1953.....	818
1933.....	714	1954.....	798
1934.....	688	1955.....	765
1935.....	718	1956.....	767
1936.....	700	1957.....	763
1937.....	683	1958.....	766
1938.....	708	1959.....	753
1939.....	750		

1914(a) refers to present boundaries; 1914(b) to pre-1939 boundaries.

Sources and notes: KS-1956, pp. 202-03; Dos-1957, p. 278; SSSR-Tsif-1958, p. 356; Eliutin-VSSS-1959, p. 22; Narkhoz-1960, p. 740. Additional information about the number of institutions by branch of specialization may be found in Table C-1 of the initial study SPM, pp. 334-35. It must be noted that in general, the sums of the breakdowns and counts of identified institutions invariably total to a number smaller than the officially reported grand total.

TABLE IV-C-2.—Number of Soviet higher educational establishments, by field, for selected years, 1913-49

Year end	Engineering			Agri- culture	Socioec- onomic	Educational				Health			(m)	Extension and Party			
	(a)	(b)	(c)			(f)	(g)	(h)	(i)	(j)	(k)	(l)		(n)	(o)	(p)	(q)
	ET	EIC	ETC			TED	U	TCO	AR	TH	M	PC		ACP	IEX	EXB	GT
1913.....	19	.....	.....	15	10	[45]	9	30	6	6	6	N	95	N	N	N	N
1919.....	27	.....	.....	14	6	.....	37	54	17	9	9	N	*166	N	N	N	N
1926.....	23	.....	.....	30	8	[65]	22	30	13	10	10	N	136	.....	.....	.....	.....
1927.....	25	.....	.....	30	6	[59]	20	27	12	.....	9	.....	129	.....	.....	.....	.....
1928.....	26	.....	.....	31	7	[54]	19	23	12	.....	11	.....	129	.....	.....	.....	.....
1929.....	32	.....	.....	38	11	[60]	20	27	13	.....	11	.....	152	.....	.....	.....	.....
1930.....	248	.....	.....	96	50	[105]	N	91	14	.....	38	.....	537	.....	.....	.....	.....
1931.....	[241]	199	42	125	(27)	154	19	.....	.....	45	.....	.....	[592]	53	.....	.....	645
1935.....	[150]	127	23	92	(23)	194	.....	.....	.....	55	.....	.....	[514]	99	.....	.....	613
1938.....	[165]	135	30	87	44	286	.....	22	22	77	.....	.....	659	49	.....	.....	708
1939.....	[165]	137	28	85	47	375	22	(329)	24	78	.....	.....	750	.....	.....	.....	.....
1946.....	169	.....	.....	88	36	[406]	31	320	55	89	74	15	[788]	.....	16	372	[808]
1949.....	166	.....	.....	90	32	[462]	32	379	51	86	72	14	836	.....	16	410	853

[] By addition.

() Derived figure.

* Does not total.

N None.

Capital letters designate grouping of institutes by field

ET—Engineering total (EIC plus ETC).

EIC—Engineering, industry and construction.

ETC—Engineering, transportation and communication.

A—Agricultural.

SE—Socioeconomic.

TED—Total education (U, TCO, AR—residual is primarily pedagogical institutes).

U—Universities.

TCO—Pedagogical and teachers institutes, institutes of foreign languages.

AR—Arts.

TH—Total health.

M—Medical only.

PC—Physical culture only.

TR—Total regular higher educational establishments (ET, A, SE, TED, TH).

ACP—Industrial academies and Higher Communist Party schools.

IEX—Independent extension training higher educational establishments.

EXB—Extension training divisions attached to regular higher educational establishments.

GT—TR plus IEX.

SOURCES AND NOTES TO TABLE IV-C-2

Place in Table

Sources and Notes

1913 a, d, e, g-k, m.—*Medynskii*—1952, p. 169.1919 a, d, e, g-k, m.—*Statisticheskii ezhegodnik, 1918-20*, vol. 2, pp. 112-113, as quoted by Gorokhoff, *Materials*, pp. 35a-35d. Note that m does not total—2 institutions short.1926, a, d-k, m.—*Pedagogicheskaya Entsiklopediya*, 1930, vol. 3, col. 263, as quoted in Gorokhoff, *Materials*, pp. 35a-35d.1927 a, d, e, g-i, k.—*Podgotovka*, pp. 64-65, as quoted by Gorokhoff, *Materials*, pp. 35a-35d.1928-30 a, d-i, k, m.—*NarKhoz*—1932, p. 513. Socioeconomic segment (1930e) is biased upward by inclusion of Kom VUZ and industrial academies.1931 b-d, f, j, n, q.—*Sots Stroi*—1936, p. 573.1931 e.—*Sots Stroi*—1936, p. 573. Since the number of Kom VUZ is given (53 institutions), socioeconomic segment institutions are derived as a residual (645 minus 53 minus sum of a, d, f, j).1935 b-d, f, j, n.—*Sots Stroi*—1936, p. 573. n. includes 17 Kom VUZ, 20 industrial academies, and 62 VKSKhSh.1935 q.—*Kul't Stroi*—1940, p. 101. The total (596 institutions) includes 17 Kom VUZ and some other than regular higher educational establishments. If double counting in *Sots Stroi*—1936, p. 573, is eliminated (i.e., VKSKhSh subtracted from total and industrial academies and Kom VUZ added), it gives about the same total as in the table—614 institutions.

1935 e.—Derived as a residual.

1938 b-f, i, j, m, n.—*Sots Stroi*—1933-38, p. 121.1939 b-g, i, j, m.—*BSE-SSSR-1948*, col. 1233. *Kul't Stroi*—1940, p. 256.1946 a, d, e, g-l.—*Medynskii*—1948, p. 73.1946 m.—By addition. *VVSh*, No. 7, 1947, p. 2, reports the total as 792, which differs from the derived total by four institutions.1946, o, p.—*VVSh*, No. 6, 1947, p. 34.1949, a, d, e, g-m, o-q.—*Medynskii*—1952, p. 167; and *BSE*—2d, vol. 9, p. 515.

TABLE IV-C-3.—*Soviet higher educational establishments, by type, branch and specialty group as of 1947, 1954, 1955, 1958, and 1959*

Type of institution by branch and specialty group	1947	1954	1955	1958
I. Engineering-industrial.....	179	177	174	188
1. Polytechnical and industrial (multidivisional institutes for engineering training in a variety of fields).....	21	24	25	29
2. Electrical and power engineering, electronics and technical (engineering) physics.....	4	8	8	8
3. Machinebuilding engineering.....	32	30	29	32
of which:				
a. General machinebuilding (mechanical and automotive).....	18	16	16	19
b. Naval engineering (shipbuilding).....	2	2	2	2
c. Aeronautical engineering.....	7	7	7	7
d. Printing machinery and precision mechanics.....	3	3	3	3
e. Motion picture industry and cinema engineering.....	2	2	1	1
4. Geology, mining, and metallurgy.....	21	26	26	27
of which:				
a. Geology, mining (all types except ores), coal mining, and petroleum engineering.....	10	15	15	15
b. Mining (ores) and metallurgy.....	11	11	11	12
5. Chemical engineering and chemical technology.....	11	9	9	10
6. Fish and food industry.....	12	13	13	13
of which:				
a. Food industry technology, machinery, and maintenance engineering.....		9	9	9
b. Fish industry technology, fleet operations and maintenance engineering.....		4	4	4
7. Light industry.....	9	8	8	8
of which:				
a. Textile industry engineering and technology.....	6	5	5	5
b. Other branches of light industry.....	3	3	3	3
8. Civil engineering, construction engineering and geodesy.....	32	27	27	29
of which:				
a. Civil engineering and other construction engineering (except roads).....	19	17	19	20
b. Technology of construction materials and testing engineering.....	6	3		
c. Geodesy.....	2	2	2	2
d. Road building and related surface structures engineering.....	5	5	6	7
9. Meteorology and hydrology.....	2	2	2	2
10. Transportation and communications (maintenance, operation and construction engineering).....	25	30	27	30
of which:				
a. Railroad.....	12	15	13	14
b. River transport.....	2	4	4	4
c. Sea transport.....	5	5	4	4
d. Air transport (civilian only).....	1	1	1	1
e. Communications.....	5	5	5	7
II. Agricultural.....	100	109	108	109
11. Agriculture.....	56	61	63	67
12. Veterinary medicine, zootechny, animal breeding, and related studies.....	20	23	21	19
13. Mechanization and electrification of agriculture (partly engineering).....	8	7	7	7
14. Soil conservation, water conservation and irrigation.....	5	6	6	5
15. Forestry and timber industry (latter is engineering).....	11	12	11	11
III. Socioeconomic.....	40	35	31	30
16. Economic planning and managerial economics.....	9	9	8	7
17. Finance.....	9	9	9	9
18. Trade and distribution.....	8	5	5	7
19. Industrial and engineering economics.....	3	3	3	3
20. Jurisprudence.....	11	9	6	4

TABLE IV-C-3.—Continued

Type of institution by branch and specialty group	1947	1954	1955	1958	1959
IV. Education, including universities, arts and cultural services.....	414	382	361	297	296
21. Universities.....	31	33	33	39	40
22. Pedagogical institutes.....	120	187	206	195	193
23. Teachers institutes.....	197	91	52	1	1
24. Institutes of foreign languages (and Moscow Institute of Far Eastern Affairs).....	8	20	19	12	10
25. Institutes for librarians and archival specialists.....	3	5	5	3	5
26. Arts.....	55	46	46	47	47
of which:					
a. Architecture.....	3	3	3	3	3
b. Graphic and sculptural arts.....	13	9	9	9	9
c. Conservatories.....	22	21	21	22	22
d. Theatrical (stage and movie actors, producers, effects, etc.).....	17	13	13	13	13
V. Health and physical education.....	89	88	88	94	95
27. Medicine.....	57	63	65	70	72
28. Stomatology.....	8	4	2	2	2
29. Pharmaceutical.....	9	8	8	7	6
30. Physical culture (teachers, coaches, and professional sportsmen).....	15	13	13	15	15
Total (accounted for).....	822	791	762	718	719

Sources and notes: The information in this table was compiled from: *Sprav VUZ-1947; Sprav VUZ-1954; Sprav VUZ-1955; Sprav VUZ-1958; Sprav VUZ-1959, passim*. The years refer to the respective academic years; i.e., 1947 refers to the academic year 1947-48. The actual count of institutions is made on the basis of listings of the Ministry of Higher Education, which it prepares in January of a given calendar year for the next academic year.

Among the institutions listed in this table there are included: 1947-15; 1954-23; 1955-22; 1958-22 independent (as contrasted with extension-correspondence divisions of regular higher educational institutions) extension-correspondence institutes. These institutes, being multi-branch establishments, operated in 1958 an estimated number of some 70 local (i.e., in different cities) branches. In addition, institutions not included in this list of professional training establishments are military academies (probably 18), commissioned officers' military schools (number unknown), police commissioned officers' schools and probably an academy (number unknown), industrial academies (prob-

ably 7) and 2 Communist Party higher educational establishments (1 Academy of Social Sciences and a Higher Party School, which probably has about 20 local branches).

It is to be noted furthermore that because there is a continuing process of consolidation and branching off among Soviet establishments of higher learning, the exact number of individual institutions cannot be ascertained precisely at any given time. And in this connection it is to be emphasized that the appearance or disappearance of individual establishments does not necessarily mean any change in the availability of physical facilities.

In 1959, among the total institutions listed, 21 were independent extension-correspondence institutions and 2 were independent branch extension-correspondence divisions of regular higher educational establishments located elsewhere (Kazan' Institute of Chemical Technology—branch in Kemerovo; and Moscow Petroleum Institute—branch in Al'met'evka).

TABLE IV-D-1.—Teaching staffs in Soviet higher education, 1927-59

Year end	Staff and plurality	Staff only	Among senior Staff	
			Professors	Associate professors
	(a)	(b)	(c)	(d)
1927.....	.....	16,454	.....	.....
1929.....	22,876	13,758	.....	.....
1931.....	58,220	26,200	.....	.....
1940.....	60,000	50,890	5,361	13,123
1943.....	.....	24,749	.....	.....
1944.....	51,904	42,072	4,669	10,125
1946.....	74,341	67,280	5,370	13,386
1947.....	81,500	.....	.....	.....
1950.....	87,000	80,000	.....	.....
1953.....	105,400	.....	.....	.....
1954.....	114,200	86,000	.....	.....
1955.....	119,059	.....	6,129	25,080
1956.....	125,000	.....	.....	.....
1957.....	132,300	.....	.....	.....
1958.....	135,700	.....	.....	.....
1959.....	137,800	.....	.....	.....

SOURCES AND NOTES

Place in table

Sources and discussion

- 1927b.—Sinetskii, *PP Kadry*, p. 61.
 1929a, b.—*Ibid.*, pp. 66, 104; also *NarKhoz-1932*, p. 540.
 1931a.—Sinetskii, *PP Kadry*, p. 79.
 1940a.—*Ibid.*, p. 98.
 1941, 1940, 1942, 1944, 1946b.—*Ibid.*, p. 104.
 1946a, b, c, d.—*Ibid.*, p. 105; *VVSh*, No. 11, 1947, p. 30.
 1946c, d.—*VVSh*, Nos. 5-6, 1946, p. 2.
 1946a, b, c, d.—*Ibid.*, p. 105; *VVSh*, No. 11, 1947, p. 30.
 1950a.—*Ibid.*, No. 4, 1951, p. 11, states that professorial staffs, including *souvestitell*, increased between 1940 and 1950 by 45 percent. Assuming 60,000 for 1940, we have 87,000 for 1950 (year end).
 1950b.—*Bol'shevik*, No. 20, 1950, p. 24; *KS-1956*, p. 248, reports this figure as 86,500.
 1954b.—*VVSh*, No. 3, 1955, p. 3.
 1955a, c, d.—*KS-1956*, p. 249.
 1947, 1950, 1953-59a.—*KS-1956*, p. 248; *NKh-1956*, p. 233; *Dos-1957*, p. 284; *NKh-1957*, pp. 257-58; *SSSR-Tsif-1958*, p. 363; *NarKhoz-1959*, p. 843; *NarKhoz-1960*, p. 754.
 NOTE.—For the years 1947, 1950, 1953-59, see also Appendix Table V-B-2.

TABLE V-A-1.—*Enrollment, acceptances and completion*

[Enrollment figures in thousands]

		1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
I. Enrollment (year end):													
1. All institutions: higher education and research establishments	T	3.0	12.7	.....	14.8	13.0	10.6	9.8	9.0	8.3	12.2	.....	16.9
	R	3.0	12.7	.....	14.8	13.0	10.6	9.8	9.0	8.3	12.2	.....	14.4
	E	(^a)	(^a)	.....	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	.....	2.5
2. Higher education	T	2.0	10.3	7.4	8.4	7.0	6.3	6.4	6.1	5.8	9.2	.....	13.2
	R	2.0	10.3	.....	8.4	7.0	6.3	6.4	6.1	5.8	9.2	.....	11.5
	E	(^a)	(^a)	.....	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	.....	1.7
3. Research establishments	T	1.0	2.4	.....	6.4	6.0	4.3	3.4	2.9	2.5	3.0	.....	3.7
	R	1.0	2.4	.....	6.4	6.0	4.3	3.4	2.9	2.5	3.0	.....	2.9
	E	(^a)	(^a)	.....	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	.....	0.8
II. Acceptances (calendar year):													
4. All institutions: higher education and research establishments	T	.....	.....	.....	.....	3,712	.....	.....	.....	.....	.....	.....	3,530
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,782
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	748
5. Higher education	T	.....	.....	.....	.....	2,098	.....	.....	.....	.....	.....	.....	2,768
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,223
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	545
6. Research establishments	T	.....	.....	.....	.....	1,614	.....	.....	.....	.....	.....	.....	762
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	559
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	203
III. Completion (calendar year):													
7. All institutions: higher education and research establishments	T	.....	.....	.....	.....	2,350	2,169	.....	.....	.....	.....	.....	1,978
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,865
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113
8. Higher education	T	.....	.....	.....	.....	974	.....	.....	.....	.....	.....	.....	1,472
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,411
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
9. Research establishments	T	.....	.....	.....	.....	1,376	.....	.....	.....	.....	.....	.....	506
	R	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	454
	E	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52

^a None.

T—Total.

R—Regular.

E—Extension-correspondence.

SOURCES AND NOTES TO TABLE V-A-1

Enrollment is reported at the end of the calendar year. Acceptances and completion of aspirantura training refer to those during the course of the calendar year.

NOTE.—Aspirantura training, which was established in 1925, accounted in 1926 for about 800 advanced students (Sinetskii, *PP Kadry*, p. 58).

2,3T and 2-3RE (29,32-38).—*Kul't Stroi-1940*, p. 242. There was a negligible number of extension program aspirantura students. Consequently R is assumed to be the same as T.

4-9T (33).—*Kul't Stroi-1934*, p. 66.

7T (34).—*Kul't Stroi-1935*, pp. 96-97.

1-3T (29, 30, 32-38, 40, 45-55).—*KS-1956*, p. 255. It should be noted that this source reports aspirantura enrollment "as of the beginning" of the calendar year. Consequently, all figures were shifted accordingly to represent year-end

of aspirantura (advanced degree) training, 1929-59

acceptance and completion figures in units]

1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
12.0	9.8	14.7	15.8	17.3	19.4	21.9	24.8	26.7	29.1	30.8	29.4	25.5	22.2	23.1	28.6
.....	8.7	.....	.....	.....	.....	18.1	.....	.....	.....	.....	21.4	17.8	14.7	15.5	18.6
.....	1.1	.....	.....	.....	.....	3.8	.....	.....	.....	.....	8.0	7.7	7.5	7.5	10.0
.....	2.8	3.7	6.9	9.6	9.6	10.0	10.7	12.5	14.6	15.7	17.2	18.0	16.8	14.1	12.1	12.3	15.6
.....	6.1	.....	.....	.....	.....	11.2	.....	.....	.....	.....	13.2	10.6	8.8	9.0	10.8
.....	0.8	.....	.....	.....	.....	1.3	.....	.....	.....	.....	3.6	3.5	3.3	3.3	4.8
.....	2.9	5.1	6.2	7.3	8.7	9.4	10.2	11.0	11.9	12.8	12.6	11.4	10.2	10.8	13.0
.....	2.6	.....	.....	.....	.....	6.9	.....	.....	.....	.....	8.2	7.2	6.0	6.5	7.9
.....	0.3	.....	.....	.....	.....	2.5	.....	.....	.....	.....	4.4	4.2	4.2	4.3	5.1
.....	7,717	.....	.....	.....	.....	7,367	5,732	.....	.....	.....
.....	6,377	.....	.....	.....	.....	5,384	4,123	.....	.....	.....
.....	1,340	.....	.....	.....	.....	1,983	1,609	.....	.....	.....
.....	4,783	.....	.....	.....	.....	4,193	3,231	.....	.....	.....
.....	4,253	.....	.....	.....	.....	3,225	2,464	.....	.....	.....
.....	530	.....	.....	.....	.....	968	767	.....	.....	.....
.....	2,934	.....	.....	.....	.....	3,174	2,501	.....	.....	.....
.....	2,124	.....	.....	.....	.....	2,159	1,659	.....	.....	.....
.....	810	.....	.....	.....	.....	1,015	842	.....	.....	.....
.....	1,366	1,616	2,730	3,328	4,582	4,093	4,895	5,682	6,495	6,796	7,607	8,453	8,250	6,802	5,603
.....	1,221	1,443	2,531	3,057	4,174	3,649	4,524	5,115	5,843	5,997	6,536	7,213	6,811	5,272	4,089
.....	145	173	199	271	354	444	371	567	652	799	1,071	1,240	1,439	1,630	1,514
.....	1,200	1,164	2,045	2,232	2,918	2,461	2,977	3,412	4,009	4,349	4,752	5,301	4,941	3,826	3,330
.....	1,092	1,080	1,910	2,086	2,730	2,281	2,880	3,216	3,769	4,000	4,263	4,805	4,288	3,119	2,585
.....	108	84	135	146	188	180	97	196	240	349	489	496	653	707	745
.....	166	452	685	1,096	1,610	1,632	1,918	2,270	2,486	2,447	2,855	3,152	3,309	2,976	2,273
.....	129	363	621	971	1,444	1,368	1,644	1,899	2,074	1,997	2,273	2,408	2,523	2,053	1,504
.....	37	89	64	125	166	264	274	371	412	450	582	744	786	923	769

entries. For 1940, 1945, 1950, figures check with those reported in *Dos-1957*, p. 287, as of the "end of the year."

2T (31, 43, 44).—Sinetskii, *PP Kadry*, p. 177 (Chart 14). This source reports also figures for 1932-38, 1940, 1945-46 the same as those in the table.

1-3T (40).—*Dos-1957*, p. 287; *NKh-1957*, p. 260; and also Sinetskii, *PP Kadry*, p. 177; *VVSh*, No. 10, 1946, p. 48.

1-3T (45,50,56).—*Dos-1957*, p. 287; *NKh-1957*, p. 260.

1-3R (40,45,50,55).—*KS-1956*, p. 255.

1-3E (40,45,50,55).—Derived as a difference.

4-6TRE (40,50,55,56).—*NKh-1957*, p. 260.

1T (41).—*BSE-SSSR*, col. 1241.

7-9TRE (40,45,50,56).—*Dos-1957*, p. 287; *NKh-1957*, p. 260.

7-9TRE (40,45-55).—*KS-1956*, p. 258. For 1940, 1945, 1950, the data are identical with those presented in *Dos-1957*, p. 287 and *NKh-1957*, p. 260.

1-3T,7-9TRE (55-58).—*NarKhoz-1959*, p. 848.

1-3,7-9TRE (56-59).—*NarKhoz-1960*, p. 760.

SOURCES AND NOTES

Place in Table

Source and Discussion

A, B, C, D, F.—Galkin, Nau Kadry, p. 155.

E, G.—Computed from F.

H.—KS-1956, p. 250. The figures incorporated into the table in column H are those stated by the source. KS-1956 reports, however, groupings of doctor degree holders by field of knowledge slightly different from those reported in columns A-D and F. This difference in grouping is particularly pronounced in the physical sciences, where the engineering science component for degrees awarded has been redistributed in such a way as to supplement the physical-mathematical and chemistry fields. The actual examination of the types of doctorates by field (VyShko-1948, pp. 342-95) which are classified under "engineering sciences" reveals that indeed a number of fields could be easily reclassified under chemistry, physics or mathematics. This apparently happened in the KS-1956 compilation. It turns out (as should be expected) that in the physical sciences, as well as in other fields, the plus and minus for figures referring to individual fields balance out in the totals. Because of this reclassification it is necessary to adjust some figures in column H to the base reporting in column F. This adjustment is shown in parenthesis and was derived as follows.

Footnote a.—It was assumed that the reclassification took place among all fields in the physical sciences, and in order to adjust column H to the reporting base of column F the following computations were made:

Rows	F	—	J	H
	Given Number	Derived distribution in percent	Actual losses, re-distributed	1955 Totals Adjusted to F-base
IV. Physical Sciences, Total	4,122	100.0	-336	3,786
1. Engineering sciences	2,360	57.2	-192	2,168
2. Physical-mathematical	640	15.5	- 52	588
3. Chemistry	596	14.5	- 49	547
4. Geology-mineralogy	526	12.8	- 43	483

Adjusted H derived by subtracting J from F.

Footnote b.—Similarly, it was assumed (on the basis of an examination of the types of doctor degrees) that the most likely components of reclassification are history-philosophy (combined), pedagogy, art and art history and geography. The adjusted figures in column H were derived as follows:

Rows	F	—	I	M
	Given Number	Derived distribution in percent	Actual losses, re-distributed	1955 Totals Adjusted to F-base
III. Humanities and social sciences, art and education, total	1,391	100.0	-194	1,197
11 and 12. History-philosophy	392	28.4	- 55	337
13. Pedagogy	116	8.4	- 16	100
15. Art and art history	77	5.5	- 11	66
17. Geography (All other fields in group III which remain unaffected)	133	9.6	- 17	116
	(673)	(48.9)	(95)	(578)

I.—Distribution derived from column H.

J.—Losses are derived as a difference by subtracting H from F. For a discussion of redistribution of losses, see footnotes a and b above.

K.—Derived rate of losses during the 19-year period in percent of J to F.

Footnote c.—Refers to fine arts, painting, sculpture, music, the theater, cinema and related fields.

Footnote d.—Refers to physical culture and, mainly, to military sciences.

TABLE V-B-1.—Number of research, academic and advanced degree personnel
in Soviet higher educational and research establishments, 1914-60
[in thousands]

Year end	Grand total: Regular and plurality			Higher educational establishments			Research establishments			Other organizations		
	T	Reg.	Pl.	T	Reg.	Pl.	T	Reg.	Pl.	T	Reg.	Pl.
	A	B	C	D	E	F	G	H	I	J	K	L
1914.....	10.2	10.2	(ⁿ)	6.0	6.0	(ⁿ)	4.2	4.2	(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1924.....			(ⁿ)	17.7	17.7	(ⁿ)			(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1925.....			(ⁿ)			(ⁿ)			(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1926.....			(ⁿ)			(ⁿ)			(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1927.....			(ⁿ)	16.4	16.4	(ⁿ)			(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1928.....			(ⁿ)			(ⁿ)			(ⁿ)	(ⁿ)	(ⁿ)	(ⁿ)
1929.....	(45.5)			122.9	113.8	(9.1)	22.6			(ⁿ)	(ⁿ)	(ⁿ)
1930.....							30.7			(ⁿ)	(ⁿ)	(ⁿ)
1931.....	(100.4)			158.2	126.2	(32.0)	42.2			(ⁿ)	(ⁿ)	(ⁿ)
1932.....							47.9			(ⁿ)	(ⁿ)	(ⁿ)
1933.....	(100.8)			[52.5]			48.3			(ⁿ)	(ⁿ)	(ⁿ)
1934.....	(93.9)			[48.0]			45.9			(ⁿ)	(ⁿ)	(ⁿ)
1935.....							39.1			(ⁿ)	(ⁿ)	(ⁿ)
1936.....							37.6					
1937.....							35.6					
1938.....							34.6					
1939.....												
1940.....	98.3			61.4	150.1	(11.3)	26.4			(10.5)		
1941.....												
1942.....												
1943.....					124.7							
1944.....				152.0	142.1	(9.9)						
1945.....												
1946.....				174.3	167.3	(7.0)						
1947.....	145.6			81.5			59.3			4.8		
1948.....												
1949.....												
1950.....	162.5			86.5	180.0	(6.5)	70.5			5.5		
1951.....												
1952.....												
1953.....												
1954.....	210.2			114.2	186.0	(28.2)	88.7			7.3		
1955.....	223.9			119.1			96.5			8.3		
1956.....	239.9			125.0			106.4			(8.5)		
1957.....	261.6			132.3			121.5			(8.1)		
1958.....	284.0			135.7			141.0			(7.3)		
1959.....	310.0			137.8			164.8			(7.4)		
1960.....	354.2			146.9			200.1			(7.2)		

¹ Figures also reported in *SPM*, p. 335.
()—Figures derived by subtraction or addition.
n—none, negligible or not applicable
[]—Estimated figures.

T—Total.
Reg—Regular (full-time).
Pl—Plurality (part-time).

SOURCES AND NOTES TO TABLE V-B-1

General note.—The figures are arranged in such a way as to have the reporting as of the year end. Actually the figures for 1947 down through 1955 are reported as of October 1 of the given year. The figures for 1946 are as of January 1, 1947; for 1944, as of January 1945; for 1943, as of November 1943; for 1940, as of October 1, 1940. The years 1931 down through 1938 are as of January of the following year (i.e., 1938 equals January 1, 1939). The year 1930 is as of March 1931; 1929 is as of January of the following year; likewise 1924 down through 1928. The column designations are as follows:

Col. A, D, G, J.—Refer to the grand total number of "jobs" (positions filled), one or more of which may be held by the same actual person.

Col. B, E, F, K.—Refer to the actual number of persons employed in staff positions.

Col. C, F, I, L.—Refer to plurality job-holders

Col. J, K, L.—"Other organizations" refer to *RAP* in government, administration, industry, party, trade-union and other such organizations.

Column in Table Source and Discussion

1914 *B, E, H.*—*SSSR-Tsif*—1958, p. 363, presents figures for 1914. In addition to this source, the figure of 10,000 for 1914A is given in *KS*—1956, p. 248. Sinetskii, *PP Kadry*, p. 35, gives the figure of 6,900 for 1916 (i.e., an approximation to 1914D).

1914 *A, D, G.*—The figures for the total are the same as those stated for regular *RAP* in 1914 B, E, H because plural job-holdings were not a recognized phenomenon. Multiple-job holders were few in number.

1940, 1950, 1956, 1957 *A, D, G.*—Figures incorporated in this table from the sources indicated for the respective years in

the notes below appear also in *SSSR-Tsif-1958*, p. 363, and *NarKhoz-1959*, p. 93.

1924 E.—Sinetskii, *PP Kadry*, p. 57.

1927 E.—Sinetskii, *PP Kadry*, p. 61.

1929 G.—*Kul't Stroi-1940*, p. 230. The figure for 1929 is that for April 1, 1929. The date is explicitly given. Note that the same figure is given "as of the end of 1929" in *SC-Eng-1936*, p. 466.

1930 G.—*NarKhoz-1932*, p. 546. *Kul't Stroi-1935*, p. 143, gives the figure of 31,600 for the beginning of the year 1931.

1929, 1931, 1940, 1943, 1944, 1946 E.—Sinetskii, *PP Kadry*, p. 104.

1929 D.—Sinetskii, *PP Kadry*, pp. 66 and 105. The 22,900 figure is also in *NarKhoz-1932*, p. 540.

1929 F.—As a difference, 22,900 (total *RAP* in higher educational establishments) minus 13,800 (regular *RAP* in higher educational establishments).

1931 D.—Sinetskii, *PP Kadry*, p. 79.

1931 G.—*SC-Eng-1936*, p. 466; and *Sots Stroi-1936*, p. 589.

1932 G.—*Kul't Stroi-1940*, p. 230, reports the figure of 47,900 *RAP* in "all" research establishments.

1933 G.—*Kul't Stroi-1935*, p. 143. The figure includes 41,300 in main research institutes and their divisions and 7,000 in other research institutes. The identical total figure (48,300) is in *SC-Eng-1936*, p. 466.

Kul't Stroi-1940, p. 230, reports the figure of 41,300 in research establishments. In order to "smooth" over the drop in the number of *RAP* (after 1935), this latter source apparently excludes personnel in branch establishments.

1934 G.—*SC-Eng-1936*, p. 466; *Sots Stroi-1936*, p. 589. The figure 45,900 includes 38,200 in main research institutes and their divisions and 7,700 in all other research establishments. *Kul't Stroi-1940*, p. 230, reports the figure of 38,700 *RAP* in research establishments. Apparently the same manipulation of statistics as mentioned in the note to 1933G above was performed for 1934G also.

1933, 1934 D.—Figures are estimated on the basis of the teacher-student ratio, which is obtained from the data in *Kul't Stroi-1935*, p. 63.

1935-38 G.—*Kul't Stroi-1940*, p. 230. All figures are as of January 1 of the calendar year that follows the year indicated in the table (i.e., all January 1 references were converted to "year end" entries).

1940 A.—*KS-1956*, p. 248; *NKh-1956*, p. 233.

1940 A, D, G, J.—*SSSR-Tsif-1958*, p. 363. For 1940D Sinetskii, *PP Kadry*, p. 93, states that there were "more than 60,000" *RAP* in higher educational establishments, of whom "over 10,000" were plurality job-holders.

1943 E.—Sinetskii, *PP Kadry*, p. 96. Same figure appears also on the graph (p. 104).

1944 D, E.—Sinetskii, *PP Kadry*, p. 100.

1946 D.—Sinetskii, *PP Kadry*, p. 105. It should be noted that of 74,300 total appointees in higher education, 67,300 had staff appointments, but among these 46,100 had only one job and 21,200 had more than one job.

1947, 1950, 1955 A, D, G, J.—*KS-1956*, p. 248. Figures as of October 1 of the corresponding year.

1950 D.—The figure 86,500, which is included in the table, is from *KS-1956*, p. 248. The corresponding figure estimated in *SPM*, p. 335, is 87,000.

1953A, D, G.—*NarKhoz-1959*, p. 843.

1954 A, D, G.—*NKh-1956*, p. 233. Figures as of October 1.

1954 E.—*VVSh*, No. 3, 1955, p. 3.

1956, 1957 A, D, G.—*SSSR-Tsif-1958*, p. 363. Figures as of October 1. An identical set of figures as those in the table is given for 1956 in *NKh-1957*, p. 257. Similar figures have also appeared in *BSE-YB-1958*, pp. 60, 82 and 94; *Vestnik statistiki*, No. 2, 1958, p. 21 (Itogi 1957); *Pravda*, Jan. 31, 1957 (Itogi 1956).

1958, 1959 A, D, G.—*NarKhoz-1960*, p. 754.

1960 A, D, G.—*SSSR-Tsif-1960*, p. 315.

1956-1960 J.—As a residual.

TABLE V-B-2.—Summary data on the composition of Soviet research and academic personnel (*RAP*) for selected post-war years (as of October 1)

	1947		1950		1953		1954		1955		1956		1957		1958		1959	
	Thous.	%	Thous.	%	Thous.	%	Thous.	%	Thous.	%	Thous.	%	Thous.	%	Thous.	%	Thous.	%
Total <i>RAP</i>	145.6	100.0	162.5	100.0	191.9	100.0	210.2	100.0	223.9	100.0	239.9	100.0	261.6	100.0	284.0	100.0	310.0	100.0
of whom employed in:																		
research establishments ^a	59.3	40.7	70.5	43.4	80.0	41.7	88.7	42.2	96.5	43.1	106.4	44.3	121.5	46.4	141.0	49.6	164.8	53.2
higher educational estab.....	81.5	56.0	86.5	53.2	105.4	54.9	114.2	54.3	119.1	53.2	125.0	52.2	132.3	50.6	135.7	47.8	137.8	44.4
other.....	4.8	3.3	5.5	3.4	6.5	3.4	7.3	3.5	8.3	3.7	8.5	3.5	7.8	3.0	7.3	2.6	7.4	2.5
Total <i>RAP</i>	145.6	100.0	162.5	100.0	191.9	100.0	210.2	100.0	223.9	100.0	239.9	100.0	261.6	100.0	284.0	100.0	310.0	100.0
of whom:																		
with doctor's degree.....	7.7	5.3	8.3	5.1	8.5	4.4	9.0	4.3	9.5	4.2	9.8	4.1	10.0	3.8	10.3	3.6	10.6	3.4
with candidate's degree.....	36.9	25.3	45.5	28.0	59.5	31.0	69.2	32.9	78.0	34.8	85.7	35.7	87.2	33.3	90.0	31.7	93.4	30.3
without advanced degree ^a	101.0	69.4	108.7	66.9	123.9	64.6	132.0	62.8	136.4	61.0	144.4	60.2	164.4	62.9	183.7	64.7	205.0	66.3
Total <i>RAP</i>	145.6	100.0	162.5	100.0	191.9	100.0	210.2	100.0	223.9	100.0	239.9	100.0	261.6	100.0	284.0	100.0	310.0	100.0
of whom with academic rank:																		
professor.....	8.9	6.1	8.9	5.5	8.5	4.4	8.8	4.2	9.0	4.0	9.1	3.8	9.4	3.6	9.6	3.4	9.7	3.2
associate professor.....	20.2	13.9	21.8	13.4	24.7	12.9	26.8	12.7	28.6	12.8	30.4	12.7	31.6	12.1	32.7	11.5	34.3	11.1
senior research associate.....	9.8	6.7	11.4	7.0	12.9	6.7	14.0	6.7	14.6	6.5	15.6	6.6	16.7	6.4	17.2	6.1	18.4	5.9
junior research associate																		
and assistant professor.....	25.6	17.6	19.6	12.1	19.8	10.3	16.2	7.7	17.1	7.6	17.8	7.4	21.3	8.1	23.6	8.3	26.3	8.5
other (lower ranks) ^a	81.1	55.7	100.8	62.0	126.0	65.7	144.4	68.7	154.6	69.1	167.0	69.5	182.6	69.8	200.9	70.7	221.3	71.3

^a Derived as a residual.

^b Includes research establishments and academies of the USSR and union republics.

SOURCES: For 1947, 1950, 1955: *KS-1956*, p. 248; for 1950, 1954, 1955: *NKh-1956*, p. 233; for 1956, 1955: *Doc-1957*, p. 248; *NKh-1957*, pp. 257-58; for 1957: *SSSR-Tsif-1958*, p. 363; for 1953, 1956, 1957, 1958: *NarKhoz-1959*, p. 843; 1959: *NarKhoz-1960*, p. 754.

Years of College Education, by Major Occupation Group, as of April 1950.

TABLE VI-US-3.—Estimated Number of Persons Employed in the U. S. with Four or More Years of College Education by Major Industry Group, Occupation Group and Sex, as of April 1950

TABLE VI-US-4.—Number and Ratio of Persons with Four or More Years of College Education

among Selected Engineering and Scientific Occupations in the United States, by Sex, as of April 1950

APPENDIX VI-Q.—Comparison of Soviet and United States Reporting of Industry Sectors

APPENDIX VI-W.—Quotations of Monthly Wage Scales and Index of Wages for Various Occupations of Soviet Workers and Salaried Employees

TABLE VI-A-1.—*Aggregate number of professionals and semiprofessionals employed in the civilian economy of the U.S.S.R., selected years, 1913-59*
[In thousands]

Date and type of reporting	Professionals with completed higher education	Semiprofessionals with secondary specialized education	Total trained specialists	Source note
Year end 1913.....	136.0	34.0	190.0	AA
January 1928 (<i>TsSU</i> , actual figures, 1957 reporting).....	233.0	288.0	521.0	A
Year end 1929 (estimate in <i>SPM</i> on basis of <i>Gosplan</i> reporting).....	(283.5)	.....	.....	B
Year end 1932 (<i>Gosplan</i> , actual figures).....	462.4	903.7	1,366.1	C
Year end 1937 (<i>Gosplan</i> , actual figures).....	748.8	1,440.0	2,188.8	D
Year end 1940 (estimate in <i>SPM</i> on the basis of a variety of sources).....	(850.0 to 900.0)	(1650.0 to 1700.0)	(c. 2550.0)	E
January 1, 1941 (<i>TsSU</i> , actual figures, 1956 reporting).....	908.0	1,492.2	2,400.2	F
Year end 1946 (official statement).....	.....	.....	(c. 3000.0)	G
Year end 1948 (estimate in <i>SPM</i> on the basis of <i>Gosplan</i> percentage increase reporting).....	.....	.....	(c. 3920.0)	H
Year end 1950 (estimate in <i>SPM</i> on basis of <i>Gosplan</i> percentage increase reporting).....	(1573.0 to 1665.0)	(3015.0 to 3107.0)	(c. 4680.0)	I
Year end 1953 (estimate in <i>SPM</i> on basis of <i>Gosplan</i> percentage increase reporting).....	(1870.0 to 1980.0)	(3870.0 to 3980.0)	(c. 5850.0)	J
Year end 1954 (estimate in <i>SPM</i> on basis of <i>Gosplan</i> percentage increase reporting).....	(c. 2218.0)	(c. 3885.0)	(c. 6103.0)	K
July 1, 1955 (<i>TsSU</i> , actual figures, 1956 reporting).....	2184.0	2949.1	5133.1	L
January 1 1956 (<i>TsSU</i> actual figures, 1956 reporting).....	2340.0	3213.0	5553.0	M
December 1, 1956 (<i>TsSU</i> actual figures, 1957 reporting).....	2633.0	3624.0	6257.0	N
December 1, 1957 (<i>TsSU</i> , actual figures, 1958 reporting).....	2805.0	4016.0	6821.0	O
December 1, 1958 (<i>TsSU</i> , actual figures, 1959 reporting).....	3027.0	4449.0	7476.0	P
December 1, 1959 (<i>TsSU</i> , actual figures, 1960 reporting).....	3236.0	4781.0	8017.0	Q

SOURCES AND NOTES TO TABLE VI-A-1

Row in table Sources and Notes

- AA.—*Vestnik statistiki*, No. 5, 1959, p. 80.
A.—*Dos-1957*, p. 257. The source indicates that the figures are "as of 1928." On the basis of an examination of the breakdowns, it appears that the date should have been "end of 1927" or "Jan. 1928."
B.—Estimate presented in *SPM*, p. 343, on the basis of figures given in *Itogi pervogo FYP*, pp. 215-19 and *Plan Kadrov-1930*, p. 104.
C.—*Vtoroi FYP*, pp. 512-13 (also reported in *SPM*, p. 344).
D.—*Tretii FYP*, p. 238 (also reported in *SPM*, p. 345).
F, L.—*NKh-1956*, p. 194.
M.—*NKh-1956*, p. 193.
N.—*Dos-1957*, p. 257.
O.—*SSSR-Tsif-1958*, p. 316. This source also repeats the data for Rows AA, A, F, L and N.
P.—*Vestnik statistiki*, No. 5, 1959, p. 80. This source repeats the data for Rows A, F, L, and O as well.
AA, A, F, L-P, Q.—*NarKhoz-1959*, pp. 102, 673; *NarKhoz-1960*, p. 602.
E, G, H, I, J.—Estimate derived in *SPM*, pp. 345-49, on the basis of Soviet official reporting by the Gosplan of percentage increases in the number of specialists employed in any given year in reference to another year of reporting used as a base. Soviet postwar pronouncements about the number of trained specialists employed in the national economy were as follows (year-end references):

Year	Reference of increase	Source
1946.....	"Somewhat over 3 million".	<i>VVSh</i> , Nos. 11-12, 1946, p. 1 (Kaftanov).
1948.....	155 percent of 1940.....	<i>Nar Khoz-SBX</i> , No. 3, p. 413 (<i>Itogi</i> 1948).
1949.....	168 percent of 1940.....	<i>Nar Khoz-SBX</i> , No. 3, p. 445 (<i>Itogi</i> 1949).
1950.....	109 percent of 1949.....	<i>Nar Khoz-SBX</i> , No. 4, p. 423 (<i>Itogi</i> 1950).
1950.....	184 percent of 1940.....	<i>Voprosy ekonomiki</i> , No. 5, 1951, p. 13 (<i>Itogi</i> 1946-50).
1951.....	108 percent of 1950.....	<i>Voprosy ekonomiki</i> , No. 2, 1952, p. 11 (<i>Itogi</i> 1951).
1951.....	"Somewhat over 5 million".	<i>Bol'shevik</i> , No. 7, 1952, p. 28 (Kulagin article).
1952.....	108 percent of 1951.....	<i>Pravda</i> (Malenkov), Oct. 6, 1952.
1952 (fall).	"About 5,500,000" or "about 220 percent of 1940"	<i>Pravda</i> , Jan. 23, 1953 (<i>Itogi</i> 1952).
1953.....	108 percent of 1952.....	<i>Pravda</i> , Jan. 31, 1954 (<i>Itogi</i> 1953).
1953.....	137 percent of 1949.....	<i>Pravda</i> , March 13, 1954 (Saburov speech).
1954.....	109 percent of 1949.....	<i>Pravda</i> , Jan. 21, 1955 (<i>Itogi</i> 1954).

These pronouncements have to be elaborated upon and worked out in numerical terms. Then they may be used for checking purposes with various estimates.

In the first place, by using 1952 or 1951 as a base, we can obtain several rough approximations as to the size of the professional and semiprofessional labor force for various years. On the basis of the data stated in the table above, the following derivations can be made:

1. 1952 (fall) total size was about 5,500,000, which was 2.2 times larger than in 1940, making 1940 about 2,500,000.

2. 1952 total was about 5,500,000, which was 108 percent of 1951, and therefore 1951 total was 5,093,000; 1951 total was 108 percent of 1950 or 4,715,000.

(a) 1950 was 184 percent of 1940; consequently 1940 was 2,562,000.

(b) 1950 total was 109 percent of 1949 and therefore 1949 total was 4,325,000; 1949 total was 168 percent of 1940, making 1940 total 2,574,000.

3. Total size in 1951 was about 5 million, which was 108 percent of 1950 and 1950 therefore was about 4,630,000.

(a) 1950 total was 184 percent of 1940; consequently 1940 was 2,516,000.

(b) 1950 total was 109 percent of 1949 and therefore 1949 total was 4,248,000; 1949 total was 168 percent of 1940, giving 2,528,000 for 1940.

4. 1951 total was about 5 million, which was 108 percent of 1950, thus 1950 was about 4,630,000; 1950 total was 109 percent of 1949, and therefore 1949 total was 4,248,000. 1953 total was 137 percent of 1949, and therefore 1953 total was 5,820,000.

5. 1952 total was about 5.5 million, 1953 total was 108 percent of 1952 or 5,940,000; 1953 total was 137 percent of 1949 total, and therefore 1949 total was 4,336,000. 1949 total is 168 percent of 1940, and consequently 1940 total is about 2,580,000.

6. 1951 total was about 5 million; 1952 total was 108 percent of 1951 total, making 1952 total 5.4 million; 1953 total was 108 percent of 1952 total, or 5,832,000; 1953 total was 137 percent of 1949 total, and therefore 1949 total was 4,257,000. 1949 total is 168 percent of 1940, making 1940 total 2,534,000.

7. 1948 total was 155 percent of 1940; consequently—

(a) Assuming 1940 as 2,500,000, 1948 total was 3,875,000.

(b) Assuming 1940 as 2,550,000, 1948 total was 3,952,000.

8. 1954 total was 109 percent of 1953; consequently assuming 1953 total as about 5,820,000, we obtain 1954 total of 6,345,000.

All these computations indicate that, although none of the figures coincides for a given year and they all show differences depending on the way in which they were derived, nevertheless, from official pronouncements rough approximations can be obtained about the size of the Soviet professional and semiprofessional labor force combined. The variation is obviously due to the rounding of both base figures for 1952 and 1951 and reported percentage increases. Despite this, the figures for the following years can be accepted as rough approximations:

Year end	Set of estimated figures			Approximate total
1940	2,500,000;	2,562,000;	2,574,000;	
	2,580,000;	2,528,000;	2,534,000	c. 2,550,000
1946		—		c. 3,000,000
1948	3,875,000;	3,952,000		c. 3,920,000
1949	4,325,000;	4,248,000;	4,336,000;	
	4,257,000			c. 4,270,000
1950	4,715,000;	4,630,000		c. 4,680,000
1951		—		c. 5,000,000
1952		—		c. 5,500,000
1953	5,820,000;	5,940,000		c. 5,850,000
1954	6,376,000;	6,345,000		c. 6,350,000

In addition to the aggregate number of trained specialists for the years 1940, 1950 and 1953, the distribution of professionals and semiprofessionals can be estimated in the following way.

For 1940 one Soviet source (*VVSh*, No. 10, 1946, p. 4) gives the following figures on workers and employees in the national economy per trained specialist:

1. In 1940 there were 36 workers and employees per each professional with completed higher education.

2. In 1940 there were 21 workers and employees per each semiprofessional with completed secondary specialized education.

3. In 1940 there were 13 workers and employees per each trained professional and semiprofessional combined with completed higher and secondary specialized education, respectively.

Since there is no indication as to whether these figures refer to year end, average annual, or the January 1 reporting of the nonagricultural labor force of Soviet workers and salaried employees employed in the national economy, it is impossible to be certain which employment figures should be used in reconstruction. Therefore the following estimates were made:

Version I. Assuming the 1940 (Jan. 1) nonagricultural labor force as 30 million (W. Eason in A. Bergson (ed.), *Soviet Economic Growth*, p. 110):

	Thousands
1. Estimate of number of professionals.....	833
2. Estimate of number of semiprofessionals....	1,429
3. Total.....	2,262
4. Estimate of number of professionals and semiprofessionals combined.....	2,308

Version II. Assuming the 1940 (average annual) nonagricultural labor force as 31.2 million [*idem*]:

1. Estimate of number of professionals.....	866
2. Estimate of number of semiprofessionals....	1,486
3. Total.....	2,352
4. Estimate of number of professionals and semiprofessionals combined.....	2,400

Version III. Assuming the 1940 (year end, i.e., Jan. 1, 1941) nonagricultural labor force as 31,500,000 [*idem*]:

1. Estimate of number of professionals.....	875
2. Estimate of number of semiprofessionals....	1,500
3. Total.....	2,375
4. Estimate of number of professionals and semiprofessionals combined.....	2,423

The discrepancies are obviously due to rounding of both figures on workers and employees and number of workers and employees per one specialist of any given level. There is admittedly no precision in such estimates, but it seems most likely that the figures refer to the beginning of the year. If we assume that the 1940 (year end) number of specialists was about 2,550,000 and that graduations of specialists in 1940 were about 320,000, then the figure for 1939 (year end, i.e., Jan. 1, 1940) should have been somewhat above 2,230,000 (without accounting for attrition), or about the same as in Version I above. Consequently, there is a probability that the figures stated do refer to January 1940 rather than to the end of that year.

Regardless of these discrepancies and uncertainty as to the date of reporting, on the basis of these data it is possible to ascertain that by 1940 the labor force of trained specialists consisted of 33 to 35 percent professionals with higher education and 67 to 65 percent semiprofessionals with secondary specialized education. Applying this ratio, there were, by 1940, 850,000–900,000 professionals and 1,650,000–1,700,000 semiprofessionals.

Another significant statement about the professional labor force relates to this estimate of professionals with completed higher education from among all trained specialists. One source (Zhirnov, *Kul'turnoe*, p. 23) states that just before the beginning of the war in 1941, the number of professionals employed in the national economy was "almost 1 million." Since graduations in 1941 were about 100,000, the 1940 total number of professionals employed was less than 900,000, or about the same as indicated in the reconstruction presented above.

For 1950 one source (F. Koshelev, *Pod'em material'nogo i kul'turnogo urovnia zhizni sovetskogo naroda*, Moscow, 1954, p. 40) states that between 1940 and 1950 the total trained labor force (number of employed specialists) increased by 84 percent, and that the number of professionals increased by 85 percent. The first part of this statement confirms the relationship utilized for the estimates above that the 1940 total trained labor force was about 2,550,000 and in 1950 was about 4,680,000:

	[in thousands]			
	1940 Version (a)	1940 Version (b)	1950 Version (a)	1950 Version (b)
Professionals	850	900	1,573	1,665
Semiprofessionals	1,700	1,650	3,107	3,015
Total trained labor force ..	2,550	2,550	4,680	4,680

For 1953 one source (*VVSh*, No. 10, 1954, p. 1) states that the number of professionals with higher education employed in the national economy increased between 1940 and the end of 1953 by 220 percent. Assuming the 1940 composition, we obtain the following composition of professional and semiprofessional labor force, depending upon which assumed distribution for 1940 is taken:

	[in thousands]			
	1940 Version (a)	1940 Version (b)	1950 Version (a)	1950 Version (b)
Professionals	850	900	1,870	1,980
Semiprofessionals	1,700	1,650	3,980	3,870
Total trained labor force ..	2,550	2,550	5,850	5,850

Note: All these estimates were made before data in absolute numerical terms were officially released in 1956. In retrospect, therefore, the estimate of the number of professionals in the Soviet economy seems to be sufficiently accurate (*SPM* estimate, 850-900,000; 1956 official reporting, 908,000). The number of semiprofessionals was overestimated by 150-200,000 (*SPM* estimate, 1,650,000-1,700,000; 1956 official reporting, 1,492,000). The most likely explanation of this latter difference is that a large number of semiprofessionals withdrew from the labor force for further training or to serve in the armed forces.

TABLE VI-A-2-P.—Soviet professional labor force: actual number of graduate specialists employed in the civilian economy of the U.S.S.R. by branch specialty in which they were trained, 1928-59
[in thousands]

Branch	Jan. 1928	Year end 1937	SPM estimate year end 1940	Jan. 1 1941	SPM estimate year end 1954	July 1 1955	Dec. 1 1956	Dec. 1 1957	Dec. 1 1959
	A	B	C	D	E	F	G	H	I
1. Engineering-industrial.....	47.0	262.2	(283.5)	289.9	(541.0)	585.9	720.9	816.1	986.6
2. Agricultural.....	28.0	89.5	(97.3)	69.6	(189.0)	158.7	179.5	193.1	222.4
3. Socioeconomic.....	26.0	60.2	(61.7)	80.2	(125.0)	160.9	197.7	215.3	259.4
a. Economics, planning and merchandising.....	13.0	.....	.....	59.3	.....	113.8	141.2	157.5	193.9
b. Jurisprudence.....	13.0	.....	.....	20.9	.....	47.1	56.5	57.8	65.5
4. Educational-cultural.....	59.0	231.0	(284.1)	300.4	(857.0)	906.4	1116.6	1144.9	1278.9
5. Health.....	63.0	105.9	(121.6)	140.8	(324.0)	299.0	329.4	346.0	378.6
Total, 1-5.....	223.0	748.8	(848.2)	880.9	(2036.0)	2110.9	2544.1	2715.4	3125.9
Undistributed residual.....	10.0	.....	(57.8)	27.1	(182.0)	73.1	87.1	90.1	109.8
Grand total.....	233.0	748.8	(906.0)	908.0	(2218.0)	2184.0	2631.2	2805.5	3235.7

TABLE VI-2-SP.—Soviet semiprofessional labor force: actual number of technical specialists employed in the civilian economy of the U.S.S.R. by branch specialty in which they were trained, 1928-59
[in thousands]

Branch	Jan. 1928	Year end 1937	SPM estimate year end 1940	Jan. 1 1941	SPM estimate year end 1954	July 1 1955	Dec. 1 1956	Dec. 1 1957	Dec. 1 1959
	A	B	C	D	E	F	G	H	I
1. Engineering-industrial.....	51.0	372.3	(413.5)	320.1	na	804.9	1049.7	1257.0	1679.5
2. Agricultural.....	31.0	145.5	(191.7)	92.8	na	254.4	295.4	310.0	360.7
3. Socioeconomic.....	8.0	184.6	(174.9)	42.4	na	209.3	274.8	314.0	405.7
a. Economics, planning and merchandising.....	6.0	.....	.....	36.2	na	186.1	251.8	294.0	387.6
b. Jurisprudence.....	2.0	.....	.....	6.2	na	23.2	23.0	20.0	18.1
4. Educational-cultural.....	137.0	524.3	(618.9)	536.4	na	818.6	934.1	971.0	1018.4
5. Health.....	48.0	213.3	(370.6)	393.2	na	731.1	900.2	980.0	1119.7
Total, 1-5.....	275.0	1440.0	(1769.6)	1384.9	na	2818.3	3454.2	3832.0	4584.0
Undistributed residual.....	13.0	.....	.....	107.3	na	130.8	167.4	184.0	197.1
Grand Total.....	288.0	1440.0	(1769.6)	1492.2	3885.0	2949.1	3621.6	4016.0	4781.1

SOURCES AND NOTES TO TABLE VI-A-2-P

Column

Sources and Notes

A.—*Dos-1957*, p. 258; *SSSR-Tsif-1958*, p. 316.B.—*Tretii FYP*, p. 238.C.—Estimate from *SPM*, p. 361, derived as follows (Version P):
[in thousands]

	(M)	(N)	(O)	(P)
Engineering	351.2	333.9	317.3	283.5
Agricultural	120.5	114.6	108.9	97.3
Socioeconomic	76.8	72.9	69.1	61.3
Educational	349.1	333.2	317.9	284.1
Health	149.9	142.7	136.1	121.6
Total	1,047.5	997.3	949.3	848.2

(M) Derived by method of straight addition of graduating classes to the assumed 1937 distribution of employed specialists.

(N) Derived by method of assumed 2 percent average annual attrition rate using 1937 as a base.

(O) Derived by the method of assumed 4 percent average annual losses using 1937 as a base.

(P) Derived by method of assumed 2 percent average annual losses using 1937 as a base and making a downward adjustment for prewar withdrawal (100,000) of professionals from civilian employment (i.e., draft, incarceration, etc.).

Note that party school graduates and extension-correspondence graduates 1938-40 were not included in the distribution. Their total, of 57,800 (adjusted for attrition), is given in the undistributed residual.

D.—*NKh-1956*, p. 194. The same data were repeated in all subsequent statistical handbooks in tables dealing with the employment of specialists.E.—Estimate derived in *SPM*, p. 363, in the following way:

	[in thousands]				
	1950	1951	1952	1953	1954
Engineering	427.6	447.3	467.6	498.2	541.2
Agricultural	140.1	149.0	160.7	174.5	189.0
Socioeconomic	88.4	98.4	109.2	119.0	124.6
Educational	607.4	674.5	748.3	803.3	857.2
Health	249.1	264.1	290.8	305.9	323.7
All fields	1,512.6	1,633.3	1,776.6	1,900.9	2,035.7
Total, adjusted to include extension graduates	1,512.6	1,680.0	1,864.0	2,027.0	2,218.0

These estimates are derived by the method of assumed 2 percent average annual losses using 1950 as a base. The assumption is made that the 1950 distribution of professionals by field derived below (Version P) is essentially a "true" estimate. The 1950 estimates were as follows:

	[in thousands]						
	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
Engineering	580.6	485.6	461.4	419.1	388.7	427.6	445.6
Agricultural	192.4	160.0	151.7	134.1	127.1	140.1	146.2
Socioeconomic	121.5	101.2	95.8	84.9	80.4	88.4	92.6
Educational	771.3	665.4	641.2	578.2	557.5	607.4	620.3
Health	321.0	274.2	263.6	236.4	227.7	249.1	254.7
Total	1968.8	1686.4	1613.7	1452.7	1381.4	1512.6	1559.4

(K) Estimated by straight addition of graduating classes to 1937 base.

(L) Estimated by method of 2 percent average annual losses without any adjustment.

(M) Estimated by method of 2 percent average annual losses with assumed 8 percent hypothetical war losses.

(N) Estimated by method of 4 percent average annual losses without any adjustment.

(O) Estimated by method of 4 percent average annual losses with assumed 8 percent hypothetical war losses.

(P) Estimated by method of 2 percent average annual losses with assumed 8 percent hypothetical war losses and with downward adjustment for prewar (1937-40) excessive losses or withdrawals of professionals from civilian labor force.

(Q) Estimated at 3 percent average annual losses without any adjustment for either hypothetical war losses or prewar withdrawals.

Note that the 1950 and 1954 estimates exclude extension-correspondence and party school graduates. The 1954 total of 182,000 (adjusted for attrition) is given in the undistributed residual. The 1950 estimate of professional graduates (Version P) does not appear on Table VI-A-2-P because no comparison is available with the new official releases. See also the further notes and checks on the 1950 and 1954 estimates in *SPM*, pp. 161-65.

F.—*NKh-1956*, p. 194.G.—*NKh-1957*, p. 209-10; *Dos-1957*, p. 258.H.—*SSSR-Tsif-1958*, p. 317.A, D, G, H.—*NarKhoz-1959*, p. 674.I.—*NarKhoz-1960*, p. 604.

SOURCES AND NOTES TO TABLE VI-A-2-SP

Column

Sources and Notes

A.—*Dos-1957*, p. 258; *SSSR-Tsif-1958*, p. 318.B.—*Tretii FYP*, p. 238.C.—Estimated in *SPM*, p. 363 (Version N) as follows:

[in thousands]

	(K)	(L)	(M)	(N)
Engineering	484.3	459.8	436.4	413.5
Agricultural	223.5	213.2	203.5	191.7
Socioeconomic	206.1	194.8	183.9	174.9
Educational	723.0	688.5	655.3	618.9
Health	428.8	412.2	396.2	370.6
Total	2,065.7	1,968.5	1,875.3	1,769.6

(K) Derived by the method of straight addition of graduating classes to the assumed 1937 distribution of employed specialists.

(L) Derived by the method of assumed 2 percent average annual attrition rate, using 1937 as a base.

(M) Derived by the method of assumed 4 percent average annual losses, using 1937 as a base.

(N) Derived by the method of assumed 2 percent average annual losses, using 1937 as a base and making a downward adjustment for prewar withdrawal (200,000) of semi-professionals from civilian employment (i.e., draft, incarceration, etc.). It must be noted that despite this adjustment, the total (1,769,600) is still about 70,000 above the estimated total semi-professional labor force. No adjustment was made to account for this difference, since such an adjustment would require further assumptions (i.e., another set of assumptions different from those used in estimates of the professional labor force), and this would complicate even further the estimating technique adopted.

D.—*NKh-1956*, p. 194. The identical data were repeated in all subsequent handbooks released in 1956-60.E.—Estimated in *SPM*, p. 364. See notes on possible sources of discrepancies and uncertainty of estimating technique in *SPM*, pp. 363-64. The distribution by branch was not available.F.—*NKh-1956*, p. 194; *NKh-1957*, p. 209.G.—*NKh-1957*, p. 209; *Dos-1957*, p. 258.H.—*SSSR-Tsif-1958*, p. 318.A, D, G, H.—*NarKhoz-1959*, p. 674.I.—*NarKhoz-1960*, p. 604.

In addition to the data on the number of specialists employed in the national economy presented in Tables VI-A-2-P and VI-A-2-SP, for the years 1928 and 1932 a different type of reporting of specialists employed in the national economy is available in Soviet sources. These data are presented in the supplement below.

SUPPLEMENT TO TABLES VI-A-2-P AND VI-A-2-SP.—*Composition of Soviet trained manpower, by employment, year end 1928 and 1932*
[in thousands]

Branches	Year end 1928			Year end 1932		
	Profes- sional	Semipro- fessional	Total	Profes- sional	Semipro- fessional	Total
I. All production, administrative, and exchange branches of national economy.....	90.0	56.0	146.0	229.2	386.6	615.8
1. Industry, construction, transportation communication.....	17.9	19.9	37.8	73.6	132.5	206.1
2. Agriculture						
a. Agricultural specialists without administrative functions.....	9.3	8.5	17.8	36.3	58.5	94.8
3. Administrative, government, and exchange.....	62.8	27.6	90.4	119.3	195.6	314.9
a. Socioeconomic segment only						
II. Educational-cultural.....	^a (130.0)			156.9	382.1	539.0
1. Primary- and secondary-school teachers..	26.0	185.5	211.5	43.2	344.0	387.2
2. Higher education teachers.....	^b (10.4)					
III. Health.....	63.5	72.0	135.5	76.3	135.0	211.3
1. Medical personnel only.....						
Total.....	^c (283.5)			462.4	903.7	1,366.1

SOURCES AND NOTES TO SUPPLEMENT TO TABLES
VI-A-2-P AND VI-A-2-SP

^aIn this segment in 1932 there were about 155,000 (see Table IV-A-1-G) persons. Since about 30,000 graduated during the 5-year period, there were about 130,000 "educational-cultural" specialists in 1928.

^bPlan *kadrov*-1930, p. 104.

^cBy addition of I, II, III, where II is an estimate.

All figures for 1928 except those in parentheses are from *Itogi pervogo FYP*, pp. 215-19, 275. The source does not give full coverage of all trained specialists employed. Productive

branches in engineering and in agricultural are singled out, but administrative employment of trained specialists is not given by segment.

All figures for 1932 from *Vtoroi FYP*, pp. 512-13. This table is compiled from Gosplan reporting with full coverage. Administrative personnel (1-3) is singled out from all productive branches of the national economy and is not distributed by field.

The total of 1,366,000 trained specialists constitutes about 50 percent of all specialists employed in the national economy (2,737,000).

APPENDIX VI-A-3.—*Soviet Professional and Semiprofessional Labor Force: A Comparison of Estimates and Official Reporting of the Absolute Number of Specialists Employed in the Civilian Economy*

1. Professional Labor Force Estimate

In the appendix to Chapter VI, Tables VI-A-1, VI-A-2-P and VI-A-2-SP present information concerning the supply of specialized manpower employed in the Soviet civilian economy. The data in these tables are of two types: figures stated directly in absolute terms and estimates based on Soviet official releases, which during the years shortly prior to World War II, during its course, and for eleven years afterwards were cast almost exclusively in the enigmatic lingo of "percentage increase." This propagandistically oriented "percentage" game which the Soviet statistical agencies were playing was the product of two dichotomous objectives. One was official secrecy, which wanted to conceal the actual magnitudes of various eco-

nomic indices (including the supply of trained manpower). The other was a drive to "impress" the Soviet population and the world at large by boastful claims that the Soviet Union was making continuing advances. Among other things, the percentages tried to conceal the devastation and losses of manpower caused by World War II and by political purges in the late 1930's. On the other hand, they always made for favorable comparisons between past and present.

In 1956 and 1957 the ice was broken somewhat, mainly for propagandistic reasons (the celebration of the Fortieth anniversary of the October Revolution), and partly because of the desire to straighten out some of the statistical series. In 1956-60 the release of a large number of statistical handbooks

Bibliography

In this bibliography those primary sources which were abbreviated throughout this volume are preceded by an asterisk, as are the abbreviations themselves. The abbreviation used in the text then follows the full entry.

PART I.—Secondary Sources

- ABELL, M. A., "Foreign Language Teaching in the U.S.S.R.," *The Modern Language Journal*, Vol. XLIII, No. 2 (Feb. 1959), 72-78.
- ABELSON, P. H. et al., "Science in the U.S.S.R.," *Science*, Vol. 126 (Nov. 19, 1957), 1095-9.
- ABETTI, P. A. and LINCKS, G. F., *Electrical Engineering Education and Research in the U.S.S.R.*, American Institute of Electrical Engineers, CP 58-147, Feb. 1958.
- Academic Freedom Under the Soviet Regime*, A Symposium of Refugee Scholars and Scientists Who Have Escaped from the U.S.S.R., on the Subject "Academic Freedom in the Soviet Union as a Threat to the Theory and Practice of Bolshevik Doctrine," Conference at Carnegie Endowment for International Peace Building, United Nations Plaza, The Institute for the Study of the History and Culture of the U.S.S.R. (Munich), New York, April 3-4, 1954.
- Administration of Teaching in Social Sciences in the U.S.S.R.* (translation of Russian "Syllabi for Three Required Courses: Dialectical and Historical Materialism, Political Economy, and History of the C.P.S.U.," Moscow, 1957), Ann Arbor: University of Michigan, 1960.
- ALGHIAN, A. A., ARROW, K. J., and CAPRON, W. M., *An Economic Analysis of the Market for Scientists and Engineers*, RM-2190-RC, Santa Monica: The Rand Corporation, June 6, 1958.
- ALT, H. and ALT, E., *Russia's Children*, New York: Bookman Associates, 1959.
- American Quarterly on the Soviet Union*, esp. issue of Nov. 1940, Nos. 2-3.
- *American Society for Engineering Education, "Engineering Education Exchange Mission to the Soviet Union in November 1958: Final Report," *Journal of Engineering Education*, Vol. 49, No. 9 (May 1959), 839-911, coded in the text as ASEE; Addendum: G. G. Mukhin, "Comments from the Soviet Union on the Report of the Engineering Education Exchange Mission," mimeographed letter circulated by N. Hall, Sept. 1959.
- American Society of Mechanical Engineers, *Definitions of Occupational Specialties in Engineering*, New York, 1951.
- ANDREEVICH, E. A., "Structure and Functions of the Soviet Secret Police," *The Soviet Secret Police*, eds. S. Wolin and M. Slusser, New York: Praeger, 1957, pp. 96-151.
- ANISIMOV, O., "The Soviet System of Education," *Russian Review*, Vol. 9, No. 4 (April 1950), 87-97.
- ARMSTRONG, J. A., "View of the Soviet Universities," *Institute of International Education News Bulletin*, XXXIX (May 1957), 4-9.
- ARROW, K. J. and CAPRON, W. M., "Dynamic Shortages and Price Rises: The Engineer-Scientist Case," *The Quarterly Journal of Economics*, Vol. LXXIII (May 1959), 292-308.
- ASCOLI, M., "Our Cut-Rate Education—an Editorial," *The Reporter*, Vol. XVIII, No. 4 (Feb. 20, 1958), 8-9.
- *ASEE (abbreviation). For full title, see American Society for Engineering Education . . .
- ASH, L. C., "Industrial Education in the U.S.S.R.," *School Shop*, Vol. 3 (Nov. 1958), 7-8.
- ASHBY, SIR E., "Ivan Goes to College: Some Reflections on Soviet Education," address delivered at the University of Arizona, Kennecott Series, April 24, 1958.
- , *Scientist in Russia*, New York: Penguin Books, 1947.
- , "Soviet Science Is a Challenge to Us," *New York Times Magazine*, April 18, 1954.
- AUBURN, N. P., "A Second Look at Russian Higher Education," *The Akron Alumnus*, Vol. XLIV, No. 1 (Sept. 1959), 3-15.
- , "Soviet Higher Education: Threat or Promise," *Association of American Colleges Bulletin*, Vol. XLIII, No. 2 (May 1957), 297-311.
- BAIKOV, A. A., *Twenty-five Years of the Academy of Sciences of the U.S.S.R.*, New York: American-Russian Institute, 1940.
- Baking Science and Management Goes to College*, and four-year curriculum on baking science and management, Florida State University booklet, n.d.
- BARGHOORN, F. C., *The Soviet Cultural Offensive*, Princeton: Princeton University Press, 1960.
- , *The Soviet Image of the United States*, New York: Harcourt, Brace and Company, 1950.
- BAUER, R. A., "The Bolshevik Attitude Toward Science," *Totalitarianism*, Proceedings of a Conference Held at the American Academy of Arts and Sciences, March 1953, Cambridge: Harvard University Press, 1954.
- , *The New Man in Soviet Psychology*, Cambridge: Harvard University Press, 1952.
- , *Nine Soviet Portraits*, Cambridge and New York: Technology Press of the Massachusetts Institute of Technology and John Wiley, 1955.
- , et al., *How the Soviet System Works*, Cambridge: Harvard University Press, 1956.
- BEAN, N., *The New Soviet Machine Age—A Look at Automation in Russia*, A Report on Manufacturing Techniques in Russia as Observed by a Ford Motor Company Engineer, 1956 (educational section).
- BENOIT, E., "'Competitive Coexistence': Can We Win?" *The Antioch Review*, Summer 1956, 146-60.
- BENTON, W., "The Challenge of Soviet Education," address delivered to the Association of Higher Education, Chicago, March 6, 1956.
- , "Soviet Education: Renewed Challenge to the American People," *Current Issues in Higher Education*, 1956, Washington, D. C.: National Education Association.
- , "Soviet Education: Will America Meet the Challenge?" *Vital Issues in Education*, 1956, pp. 34-47.

- _____, "Soviet Tekhnikum: Ominous Threat to the West," *Coronet*, Vol. 41 (Dec. 1956), 69-73.
- _____, *This Is the Challenge*, New York: Associated College Presses, 1958.
- _____, "The Voice of the Kremlin," reprint from *Encyclopedia Britannica Book of the Year; 1956*, Chicago: Encyclopedia Britannica, 1956.
- BEREDAY, G. Z. F., "American and Soviet Scientific Potential," *Social Problems*, Vol. 4, No. 3 (Jan. 1957), 208-20.
- _____, "Changes in Soviet Educational Administration," *School and Society*, Vol. 86, No. 2124 (Jan. 18, 1958), 37-38.
- _____, "A Comparative Look at English, French, and Soviet Education," *Current History*, Vol. 35, No. 205 (Sept. 1958), 165-71.
- _____, "Education: Organization and Values since 1917," in C. E. Black (ed.), *The Transformation of Russian Society*, Cambridge: Harvard University Press, 1960, 353-70.
- _____, "Recent Developments in the Soviet Schools," Parts I and II, *Comparative Education Review*, Vol. 1, Nos. 1 and 2 (June and Oct. 1957), 4-7 and 10-18 respectively.
- _____, *Soviet Scientific Potential: An Example of Problem Analysis in Comparative Education*, A paper delivered on April 27, 1956, to the Third Annual Conference on Comparative Education, New York: School of Education, New York University, 1956 (mimeo).
- _____, (ed.), *Yearbook of Education: Communication Media and the School*, Tarrytown-on-Hudson: World Book Company, 1960.
- _____, BRICKMAN, W. W., and READ, G. H., (eds.), *The Changing Soviet School*, Boston: Houghton Mifflin Company, 1960.
- _____, and PENNAR, J. (eds.), *The Politics of Soviet Education*, New York: Frederick A. Praeger, 1960.
- _____, and RAPACZ, R. V., "Khrushchev's Proposals for Soviet Education," *Teachers College Record*, Vol. 60, No. 3, Dec. 1958, 138-49.
- BERGSON, A., "Comments," in "The Economy of the U.S.S.R.," "Papers and Proceedings of the 59th Annual Meeting of the AEA," *American Economic Review*, No. 2 (May 1947).
- _____, "A Problem in Soviet Statistics," *The Review of Economics and Statistics*, Vol. XXIX, No. 4 (Nov. 1947), 234-242.
- _____, "Reliability and Usability of Soviet Statistics: A Summary Appraisal," A Symposium, reprinted from *The American Statistician*, April-May and June-July 1953, 19-23.
- _____, (ed.), *Soviet Economic Growth*, Evanston, Ill.: Row, Peterson & Co., 1953.
- _____, *Soviet National Income and Product in 1937*, New York: Columbia University Press, 1953.
- _____, *The Structure of Soviet Wages: A Study in Socialist Economics*, Cambridge: Harvard University Press, 1944.
- BERMAN, H. J., "The 'Right to Knowledge' in the Soviet Union," *Columbia Law Review*, Vol. 54 (May 1954), 749-764.
- _____, and KERNER, M., *Soviet Military Law and Administration*, Cambridge: Harvard University Press, 1955.
- BERNSTEIN, M., "Higher Education in the U.S.S.R. During and After the War," *Educational Forum*, Vol. XII, No. 2 (Jan. 1948), 209-212.
- BIRKETT, K. E., "A Conference of Russian Teachers," *Soviet Studies*, Vol. 1, No. 4 (April 1950), 319-327.
- BLACK, C. E. (ed.), *The Transformation of Russian Society: Aspects of Social Change Since 1861*, Cambridge: Harvard University Press, 1960. (Proceedings of Arden House Conference, Harriman, New York, 1958.)
- BLAKE, P., "Russia: The Scientific Elite," *Second Rate Brains*, New York: Doubleday News Book, 1958, pp. 11-19.
- BLANK, D. M. and STIGLER, G. J., *The Demand and Supply of Scientific Personnel*, New York: National Bureau of Economic Research, 1957.
- BOCKRIS, J. O'M., "A Scientist's Impressions of Russian Research," *The Reporter*, Vol. XVIII, No. 14 (Feb. 20, 1958), 15-17.
- BOITER, A., "The Khrushchev School Reform," *Comparative Education Review*, Vol. 2, No. 3 (Feb. 1959), 8-14.
- BOOHER, E. E., "Some Observations on Soviet Technical Education," *Technical Education News*, Vol. XIII, No. 1 (Special Issue 1958), 1-3.
- BRICKMAN, W. W., "A Course on Soviet Education," *School and Society*, Vol. 86 (Nov. 8, 1958), 22-23.
- _____, "Education in the U.S.S.R.," *School and Society*, No. 75 (March 29, 1952), 197-203.
- _____, "A Soviet View of Educational Thought," *School and Society*, LXXXII (Jan. 5, 1957).
- _____, (ed.), *Teaching about Soviet Education*, New York: Society for the Advancement of Education, Inc., 1958.
- _____, "The Training of Soviet School Teachers," *America*, Vol. 49, No. 7, May 17, 1958.
- _____, "British Scientists' Visit to Russia: New Links of Learning," *Times Educational Supplement* (London), No. 1576, July 14, 1945.
- _____, *British Students Visit the Soviet Union*. A report of a delegation of the National Union of Students of the universities and colleges of England, Wales, and Northern Ireland, London: K-H Services, Ltd., May 1951.
- BRODERSEN, A., "Soviet Social Science and Our Own," *Social Research*, Vol. 24, No. 3 (Autumn 1957), 253-286.
- BROWN, K. E., *Offerings and Enrollments in Science and Mathematics in Public High Schools*, U.S. Dept. of Health, Education and Welfare, Washington, D. C., 1956.
- BRYNER, C., "Moscow University, 1755-1955," *Russian Review*, XIV (July 1955).
- BUCHHOLZ, A., "Entwicklungsperspektiven der Sowjetwissenschaft," *Osteuropa Naturwissenschaft*, Vol. 1, No. 2 (May 1958), 89-113.
- _____, *Ideologie und Forschung in der Sowjetischen Naturwissenschaft*, Schriftenreihe Osteuropa, No. 1, Stuttgart, 1953.
- BUDANOW, J., *Technical Institutes in the U.S.S.R.*, New York: Research Program on the U.S.S.R., mimeo. series No. 26, 1952 (in Russian).
- CAGLE, F. R., "A Biologist Visits Russia," *American Institute of Biological Sciences Bulletin*, Jan. 1959.
- CALDWELL, O. J., "Education for World Leadership," speech delivered at Central States Conference of State Departments of Education, St. Paul, Minn., June 22, 1958 (mimeo).
- _____, "Some Foundations of Soviet Educational Power," *Education Digest*, Vol. 24 (Nov. 1958), 12-14.
- Centre d'études de l'U.R.S.S., *Enseignement et système scolaire en U.R.S.S.*, Cahiers d'études soviétiques, No. 3, Paris: Fondation nationale des sciences politiques, 1949.
- CHAMBERS, M. M. (ed.), *Universities of the World Outside U.S.A.*, Washington, D. C.: American Council on Education, 1950.
- CHARQUES, R. D., *Soviet Education*, London: The Hogarth Press, 1932.
- CHAUNCEY, H., "Education as the Key to Soviet Power," *College Board Review*, Vol. 37 (Winter 1959), 33-36.
- _____, "Some Comparative Checkpoints between American and Soviet Secondary Education," *Comparative Education Review*, Vol. 2, No. 3 (Feb. 1959), 18-20.
- _____, "Some Notes on Education and Psychology in the Soviet Union," *The American Psychologist*, Vol. 14, No. 6 (June 1959), 307-312.
- CHILDS, J. L., "Education and Politics in the Soviet Union," *Teachers College Record*, Vol. 58 (Apr. 1957), 351-4.
- CLARK, C., *A Critique of Russian Statistics*, London, 1939.
- CLINCHY, E., "How Does Russian Education Compare with Ours?" *The Hartford Times*, Jan. 6-13, 1958.
- COHN, V., "The Big Push in Soviet Science," *The Saturday Evening Post*, Jan. 31, 1959.
- _____, "Scoreboard of American Science," *Minneapolis Tribune*, October 4-8, 1959.
- _____, Survey on Russian science, 15 articles, *Minneapolis Tribune*, Oct. 1958.
- COLLINS, R. and COLLINS, P., *Education in the Soviet Union*, Report by Eisenhower Exchange Fellows, Aug. 18-Sept. 19, 1958. (mimeo).
- CONANT, J. B., *The American High School Today*, New York: McGraw-Hill, 1959.

- _____, *On Understanding Science*, New Haven: Yale University Press, 1947.
- CORSON, E. M., "An Analysis of the 5-Year Physics Program at Moscow State University," *Information on Education Around the World*, No. 11, Washington, D. C.: U. S. Dept. of Health, Education and Welfare, Office of Education, Feb. 1959.
- COUNTS, G. S., *The Challenge of Soviet Education*, New York: McGraw-Hill, 1957.
- _____, *Khrushchev and the Central Committee Speak on Education*, Pittsburgh: University of Pittsburgh Press, 1959.
- _____, *The Soviet Challenge to America*, New York: John Day, 1931.
- _____, and LODGE, N., *The Country of the Blind*, Boston: Houghton Mifflin Co., 1949.
- _____, and LODGE, N. (tr), *I Want to Be Like Stalin*, New York: The John Day Co., 1947.
- COX, F. J., "Big Red Schoolhouse," *Education*, Vol. 76 (June 1956), 579-94.
- CROWTHER, J. G., *Soviet Science*, New York: E. P. Dutton, 1936.
- The Current Digest of the Soviet Press*. Weekly magazine of translated selections from Soviet periodicals. New York: The Joint Committee on Slavic Studies appointed by the American Council of Learned Societies and the Social Science Research Council.
- DALLIN, D. J. and NICOLAEVSKY, B. I., *Forced Labor in Soviet Russia*, New Haven: Yale University Press, 1947.
- DARLINGTON, T., *Education in Russia*, London: Wyman & Sons, 1909.
- DAVIDSON, W. C., "Contrasts in Education," *Bulletin of the Atomic Scientists*, Vol. 14 (April 1958), 154-56.
- "Delegation to Russia: Questions Answered," *Times Educational Supplement* (London), No. 1953, Oct. 3, 1952.
- DERTHICK, L. G. and FRY, H. W., "Education in Russia," *Pennsylvania School Journal*, Vol. 107 (Sept. 1958).
- DEWEY, J., *Impressions of Soviet Russia and the Revolutionary World*, New York: New Republic, 1929.
- DEWITT, N., "Basic Comparative Data on Soviet and American Education," *Comparative Education Review*, Vol. 2, No. 1 (June 1958), 9-11.
- _____, "The Challenge of Communist Education," in "Academic Standards," *Collier's Encyclopedia Year Book: 1959*, Collier's Encyclopedia, New York, 1959, 11-16.
- _____, "The Growing Challenge of Soviet Professional Education," a speech delivered at the Education and Manpower Symposium of the Air Force Association, Sacramento, Calif., March 1957.
- _____, "Main Issues concerning the Soviet Scientific, Engineering, and Educational Challenge," *The Mathematics Teacher*, Vol. LII, No. 1 (Jan. 1959), 24-27.
- _____, "Polytechnical Education and the Soviet School Reform," *Harvard Educational Review*, Vol. 39, No. 2 (Spring 1960), 95-117.
- _____, "Professional and Scientific Personnel in the U.S.S.R.," *Science*, Vol. 120, No. 3105 (July 2, 1954), 1-4.
- _____, "Russia Threatens U. S. Engineering Leadership!" *Aviation Age*, Vol. 23, No. 2 (Feb. 1955), 16-21.
- _____, "Russia's Coming Manpower Squeeze," *Nation's Business*, Nov. 1955, 40 ff.
- _____, "Scholarship in the Natural Sciences," in C. E. Black (ed.), *The Transformation of Russian Society: Aspects of Social Change Since 1861*, Cambridge: Harvard University Press, 1960, pp. 385-404.
- _____, "Science Education in Russia: The Qualitative Aspect," *Strengthening Science Education for Youth and Industry*, Proceedings of the Seventh Thomas Alva Edison Foundation Institute, Nov. 19-20, 1956, New York: New York University Press, 1957, pp. 102-07.
- * _____, *Soviet Professional Manpower, Its Education, Training, and Supply*, Washington: National Science Foundation, 1955. Coded in the text as SPM.
- _____, "Soviet Science Education and Its Challenge," in *Engineering and Scientific Education—Foundation of National Strength*, Washington, D. C.: Scientific Manpower Commission, 1957, 16-21.
- _____, "Soviet Science Education and Its Challenge," *Mathematics Teacher*, Vol. 51 (Feb. 1958), 66-73.
- _____, "Soviet Science Education and Its Challenge," *Second-Rate Brains*, New York: Doubleday News Book, 1958, pp. 11-19.
- _____, "Soviet Science Education and the School Reform," *School and Society*, Vol. 88, No. 2176, 297-300.
- _____, "Soviet Science: The Institutional Debate," *Bulletin of the Atomic Scientists*, Vol. XVI, No. 6 (June 1960), 208-11.
- _____, "Soviet Technical Education," in G. W. Elbers and P. Duncan (eds.), *The Scientific Revolution*, Washington, D. C.: Public Affairs Press, 1959, 64-73.
- _____, "Upheaval in Education," *Problems of Communism*, Vol. VIII, No. 1 (Jan.-Feb. 1959), 25-34, and addendum, "The School Reform and Soviet Labor," *Problems of Communism*, Vol. VIII, No. 3 (May-June 1959), 62-64.
- _____, and SHIMKIN, D. B., "U.S.S.R.," section of *International Directory of Anthropological Institutions*, 1953, 253-66.
- Direction de la Documentation, "Documents sur l'organisation de la recherche scientifique en URSS," *Notes et Études Documentaires*, No. 1571, Paris, 13 February 1952.
- DOBB, M., "Further Appraisals of Russian Economic Statistics," *Review of Economics and Statistics*, Feb. 1948.
- DOBSON, C. H., "English and Russian Education Contrasted," *Educational Forum*, Vol. 22, No. 4 (May 1958).
- DODGE, H. and DODGE, N., "Russia Gains over U. S. in Educating Scientists," *U. S. News and World Report*, Sept. 16, 1955, 94-104.
- DUGGAN, S., "Contrasting Social Systems: Russian and American," *Educational Record*, Vol. XXIX, No. 1, Supp. 17 (Jan. 1948), 41-54.
- DUNBAR, R., "Inside Russia's Schools," series of 12 articles, *Boston Traveler*, Nov. 24-Dec. 10, 1958.
- DUPREE, A. H., *Science in the Federal Government*, Cambridge: The Belknap Press of the Harvard University Press, 1957.
- DURANTY, W., "Reorganization of Higher Education in Soviet Russia," *School and Society*, Vol. XXXVI (Oct. 15, 1932), 505-06.
- EASON, W. W., *The Agricultural Labor Force and Population of the U.S.S.R.: 1926-41*, Rand Research Memorandum No. RM-1248, Santa Monica: Rand Corp., 4 May 1954.
- _____, "Population and Labor Force," in A. Bergson (ed.), *Soviet Economic Growth*, Evanston, Ill.: Row, Peterson & Co., 1953.
- _____, *Population and Labor Force*, Appendix, copyrighted manuscript for private circulation, 1953.
- _____, "The Soviet Population Today," *Foreign Affairs*, Vol. XXXVII (July 1959), 598-606.
- EASTMAN, M. (ed.), *Education and Art in Soviet Russia in the Light of Official Decrees and Documents*, New York: The Socialist Publishing Society, n.d.
- EDGERTON, W. B., "Soviet Education Today," *Institute of International Education News Bulletin*, Vol. 31 (Mar. 1956), 6-11.
- Educational Policies Commission, *The Contemporary Challenge to American Education*, National Education Association of the United States, 1958.
- EELLS, W. C., "American and Soviet Study of Science," *School and Society*, Vol. 83 (Mar. 31, 1956), 115-17.
- EFRON, A., *The Teaching of Physical Sciences in the Secondary Schools of the United States, France, and Soviet Russia*, New York: Teachers College, Columbia University, 1937.
- ELBERS, G. W. and DUNCAN, P. (eds.), *The Scientific Revolution*, Washington, D. C.: Public Affairs Press, 1959.
- Engineering Education in the Soviet Union*. Report of a team of engineers who visited Russia in the autumn of 1956. The Institution of Civil Engineers, the Institution of Mechanical Engineers, and the Institution of Electrical Engineers. London: Unwin Brothers, Ltd. 1957.
- Engineering Manpower Commission of Engineers Joint Council and Scientific Manpower Commission, *Engineering and Scientific Manpower Newsletter*, Nos. 1-117.

- Engineering and Scientific Education: Foundation of National Strength*, Proceedings of Conference Sponsored by Engineering Manpower Commission and Associated Councils, Oct. 31-Nov. 2, 1957, Washington, D. C.: Scientific Manpower Commission, 1958.
- ESSLINGER, A. A., "Health, Physical Education and Recreation Programs in the U.S.S.R.," *Journal of Health-Physical Education-Recreation*, Vol. 29 (Sept. 1958), 33-35.
- EWELL, R., "Soviet Russia Poses a New Industrial Threat," *Buffalo Business*, Vol. XXXIV, No. 4 (April 1959).
- , "23 Days in Russia," *The University of Buffalo Alumni Bulletin*, Vol. XXV, No. 1 (Spring 1958), 2-5.
- FAINSOD, M., *How Russia Is Ruled*, Cambridge: Harvard University Press, 1953.
- , *Smolensk Under Soviet Rule*, Cambridge: Harvard University Press, 1958.
- , "What Russian Students Think," *Atlantic Monthly*, Vol. 199 (Feb. 1957), 31-37.
- FELDMESSER, R. A., "Equality and Inequality under Khrushchev," *Problems of Communism*, Vol. IX, No. 2 (Mar.-Apr. 1960), 31-39.
- , "The Persistence of Status Advantages in Soviet Russia," *The American Journal of Sociology*, Vol. LIX, No. 1 (July 1953), 19-27.
- , "Social Status and Access to Higher Education: A Comparison of the United States and the Soviet Union," *Harvard Educational Review*, Vol. XXVII, No. 2 (Spring 1957), 92-106.
- "The Ferment Among Soviet Youth," *Soviet Survey*, Feb. 1957.
- FESHBACH, M., *The Soviet Statistical System: Labor Force Recordkeeping and Reporting*, International Population Statistics Reports, Series P-90, No. 12, Washington, D. C.: U. S. Department of Commerce, Bureau of the Census, 1960.
- FEUER, K., "Russia's Young Intellectuals," *Encounter* (Feb. 1957), 10-26.
- FIELD, A. W., *Education in the Soviet Union* (a list of source material in English with comments and introductory notes), New York: The American-Russian Institute, Special Publication No. 1, May 1935.
- FIELD, M. G., "The Academy of the Social Sciences of the Communist Party of the Soviet Union," *The American Journal of Sociology*, Vol. LVI, No. 2 (Sept. 1950), 137-141.
- , *Doctor and Patient in Soviet Russia*, Cambridge: Harvard University Press, 1957.
- , "Medicine in Soviet Land: Its Realities and Challenge," *Modern Medicine*, July 15, 1959, 196-207.
- , "Soviet Science and Some Implications for American Science and Society," *Journal of International Affairs*, Vol. XIII, No. 1 (Jan. 1959), 19-33.
- FINE, B., "Russia Is Overtaking U. S. in Training of Technicians," *New York Times*, Nov. 7, 1954.
- FISCHER, G., "My Soviet School Days," *The Reporter*, Vol. I, No. 9 (Aug. 16, 1949), 4-7.
- , "Soviet and American Education: Mistaken Envy," *The Progressive*, Vol. 22, No. 3 (Mar. 1958), 21-23.
- FISCHER, H. H. (ed.), *American Research on Russia*, Bloomington: Indiana University Press, 1959, esp. pp. 103-112.
- FISHER, R. T., *Pattern for Soviet Youth*, New York: Columbia University Press, 1959.
- , *The Soviet Pattern for Youth as Revealed in the Proceedings of the Congresses of the Komsomol, 1918-1949*, Ann Arbor, Michigan: University Microfilms, 1955.
- FRAYN, M., "Cambridge Goes to Moscow," *Everybody's*, Feb. 9, 1957.
- FRIEDRICH, C. J. and BRZEZINSKI, Z. K., *Totalitarian Dictatorship and Autocracy*, Cambridge: Harvard University Press, 1956.
- FRIESE, H. G., "Student Life in a Soviet University," *Soviet Education*, G. L. Kline (ed.), London: Routledge and Kegan Paul, 1957, 53-79.
- FRÖSE, L., *Ideengeschichtliche Triebkräfte der Russischen und Sowjetischen Pädagogik*, Heidelberg: Quelle & Meyer, 1956.
- , "Soviet Education from a German Perspective," *Educational Forum*, Vol. 23, No. 2 (Jan. 1959).
- GALESON, W., *Industrial Training in the Soviet Union*, RM-1479, Santa Monica: The Rand Corporation, May 5, 1955.
- (ed.), *Labor and Economic Development*, New York: John Wiley & Sons, 1959, esp. pp. 1-18.
- GALPERIN, I. et al., "The Humanities in Soviet Higher Education," *University of Toronto Quarterly*, Vol. 28, No. 1 (Nov. 1, 1958), 1-96.
- GANTT, W. H., "Bolshevik Principles and Russian Physiology," *Bulletin of the Atomic Scientists*, Vol. VIII, No. 6 (Aug. 1952), 183-188.
- GERSCHENKRON, A., *A Dollar Index of Soviet Machinery Output, 1927-28 to 1937*, Santa Monica: Rand Corp., 1951.
- GIBIAN, G., "The Image of the Scientist," *Soviet Survey*, No. 23 (Jan-Mar. 1958), 37-41.
- , "Literature and Universities in Soviet Russia: Impressions of an American Visitor," *Institute of International Education News Bulletin*, Vol. XXXII (May 1957), 10-13.
- GILES, G. C. T., "Mass Education: Why Soviet Teachers Are Opposed to Intelligence Testing," *Anglo-Soviet Journal*, Vol. 14, No. 1 (Spring 1953), 11-15.
- GILLE, J., and PELEGRIN, M., *Rapport de Mission en URSS des Ingénieurs en Chef de l'Air*, Paris, Sept. 1958 (mimeo.).
- GOODFRIEND, A., *If You Were Born in Russia*, New York: Farrar, Straus & Co., Inc., 1950.
- GOODLET, B. L., "How Mechanical Engineers are Educated in Russia," *Engineering* (London), Feb. 10, 1956, 134-35.
- GOODWILL, G. T., "Bear-tooth Curriculum," *California Journal of Secondary Education*, Vol. 34 (Apr. 1959), 197-204.
- *GOROKHOFF, B. I., *Materials for the Study of Soviet Specialized Education*, National Academy of Sciences-National Research Council, Office of Scientific Personnel, Washington, D. C., 1952 (unpubl., mimeo. report), Coded in the text as Gorokhoff, *Materials*.
- * —, *Materials* (abbreviation). For full title, see Gorokhoff, B. I., *Materials for the Study* . . .
- , *Publishing in the U.S.S.R.*, Indiana University Publications, Slavic and East European Series, Vol. XIX, 1959.
- GRANICK, D., *Plant Management in the Soviet Industrial System*, Ph.D. dissertation, New York: Columbia University, 1951.
- , *The Red Executive*, New York: Doubleday and Co., 1960, esp. pp. 61-97.
- GRECHKO, V. M., *Kommunisticheskoe vospitanie v SSSR* (Communist Education in the U.S.S.R.), Munich: Institute for the Study of the History and Institutions of the U.S.S.R., 1951.
- GREEN, B. B., *University Autonomy and Soviet Totalitarian Control*, unpubl. Ph.D. thesis, Radcliffe College, 1959.
- GROSSMAN, G., "Working Memorandum on the System for Collecting and Processing Industrial Statistics in the Soviet Union; Its Effect on the Reliability of Data," New York: National Bureau of Economic Research, July 1, 1956 (mimeo.).
- GOVSKI, V., *Soviet Civil Law*, Ann Arbor: University of Michigan Law School, 1948, Vol. I.
- GRUFFYDTH-WILLIAMS, H., "Speech and Language for the Deaf in Russia," *Volta Review*, Vol. 59 (Nov. 1957), 387-91.
- GRULIOW, L. (ed.), *Current Soviet Policies*, Ann Arbor, Mich.: Edwards Bros., I, 1953, and II, 1957.
- GUNTHER, J., *Inside Russia Today*, New York: Harper & Brothers, 1957, esp. Ch. XIII, 253-283.
- GUREVICH, A. D., "Research and Medical Practice in Russia," *Medical Science*, Vol. V, No. 2 (Jan. 25, 1959).
- HAMMER, D. P., "Legal Education in the U.S.S.R.," *Soviet Studies*, Vol. 9 (July 1957), 20-27.
- HANS, N., *Comparative Education*, London: Routledge & Kegan Paul, Ltd., 1949, esp. pp. 308-325.
- , *History of Russian Educational Policy, 1701-1917*, London: P.S. King & Sons, 1931.
- , "Recent Trends in Soviet Education," *The Annals of the American Academy of Political and Social Science*, Vol. CCLXIII (May 1949), 114-122.
- , and HESSEN, S., *Educational Policy in Soviet Russia*, London: P.S. King and Son, Ltd., 1930.
- HARMON, L. R., *A Follow-up Study of A.E.C. Fellowship*

- Candidates, Technical Report, No. 13, Office of Scientific Personnel, National Academy of Sciences-National Research Council, Washington, D.C., 13 Jan. 1958 (mimeo.).
- _____, *The Science Doctorates of 1957 and 1958*, Office of Scientific Personnel, National Academy of Sciences-National Research Council, Washington, D.C., Mar. 17, 1959.
- HARPER, S. N., *Civic Training in Soviet Russia*, Chicago: University of Chicago Press, 1929.
- HARRIS, C. D., *Geographic Research and Teaching Institutions in the Soviet Union: Notes on Trip to the U.S.S.R. in May-June 1957*, Chicago: Dept. of Geography, University of Chicago, unpubl. manuscript, 1957 (mimeo. report).
- _____, "Society, Science, and Education in the Soviet Union," *Proceedings of the National Academy of Sciences*, Vol. 45, No. 5 (May 1959), 684-692.
- _____, "The Teaching of Geography in the Soviet Union," National Council for the Social Studies, in *Yearbook 1959*, 248-257.
- HARRIS, S. E., *The Economics of Higher Education*, Cambridge: Harvard University Press, 1957 (mimeo.).
- _____, (ed.), "Higher Education in the United States: The Economic Problems," *The Review of Economics and Statistics*, Vol. XLII, No. 3 (supplement, Aug. 1960).
- _____, *How Shall We Pay for Education?* New York: Harper & Brothers, 1948.
- _____, *The Market for College Graduates*, Cambridge: Harvard University Press, 1949.
- HAUSER, P. M., "To What Extent Should National Manpower Needs Influence College Policies?" *Current Issues in Higher Education*, 1959.
- HAVIGHURST, R. J., "Is Russia Really Outproducing the U.S. in Scientists?" *School and Society*, Vol. 86, No. 2131 (Apr. 26, 1958).
- _____, "Russian and American Education—Like and Unlike," *Educational Record*, Vol. 40, No. 3 (July 1959).
- HECHINGER, F. M., *The Big Red Schoolhouse*, New York: Doubleday and Co., 1959.
- HENNINGER, G. R., *The Technical Institute in America*, Carnegie Series in American Education, New York: McGraw-Hill Book Company, Inc., 1959.
- HERZER, A., *Bolschewismus und Menschenbildung*, Hamburg, 1954.
- HEYMAN, H. JR., "The Soviet Role in International Civil Aviation," *The Journal of Air Law and Commerce*, Vol. 25, No. 3 (Summer 1958), 265-80.
- _____, *The U.S.S.R., in the Technological Race*, No. P-1754, Santa Monica: The Rand Corporation, July 20, 1959.
- HILL, K. B., *A Bibliography on the Sociology of Soviet Science*, Cambridge: Associates for International Research, Inc., 1959 (mimeo.).
- HOEFFDING, O., "Substance and Shadow in the Soviet Seven Year Plan," *Foreign Affairs*, Vol. XXXVII (April 1959), 394-406.
- _____, and NIMITZ, N., *Soviet National Income and Product, 1949-1955*, ASTIA Document No. AD 213477, RM-2101, Santa Monica: The Rand Corporation, April 6, 1959.
- HORST, W., *Das technische Bildungsideal in der Sowjetunion*, Hanover, 1958.
- HOUGH, J. F., *The Role of the Local Party Organization in Soviet Industrial Decision-Making*, unpubl. Ph.D. thesis, Harvard University, 1961.
- _____, "The Technical Elite vs. the Party—A First-hand Report," *Problems of Communism*, Vol. VIII, No. 5 (Sept.-Oct. 1959), 56-59.
- HOUTHAKKER, H. W., "Education and Income," *The Review of Economics and Statistics*, Feb. 1959, 24-28.
- HUGHES, F., "Soviet Invention Awards," *Economic Journal* (London), Vol. 55 (1945), 291-297.
- HULICKA, K., "Political Education in Soviet Schools," *Soviet Studies*, Vol. V, No. 2 (Oct. 1953), 138-150.
- HUNT, H. C., "Visit to Russia," *National Parent-Teacher Magazine*, Vol. 53 (Jan. 1959), 8-11.
- HUXLEY, J., *Heredity East and West: Lysenko and World Science*, New York: Henry Schuman, 1949.
- IGNATIEV, P. N., ODINETZ, D. M. and NOVGOROTSEV, P. J., *Russian Schools and Universities in the World War*, New Haven: Yale University Press, 1929.
- INKELES, A., "Family and Church in the Postwar U.S.S.R.," *The Annals of the American Academy of Political and Social Science*, May 1949, 33-44.
- _____, "Industrial Man: The Relation of Status to Experience, Perception, and Value," *The American Journal of Sociology*, Vol. LXVI, No. 1 (July 1960), 1-31.
- _____, *Public Opinion in Soviet Russia*, Cambridge: Harvard University Press, 1950.
- _____, *A Statement Presented to the Committee on Foreign Relations*, United States Senate, Feb. 18, 1958, mimeographed.
- _____, and BAUER, R. A., *The Soviet Citizen: Daily Life in a Totalitarian Society*, Cambridge: Harvard University Press, 1959.
- Institute of International Education, *Report of the IIE Seminar on Education in the Soviet Union*, Nov. 19-20, 1959, New York, 1960.
- _____, *Report of the IIE Seminar on Industrial Technology in the Soviet Union*, Mar. 24-25, 1960, New York, 1960.
- Institute for the Study of the U.S.S.R., *Institute Publications (1951-1958)*, Part I: Complete List of Institute Publications; Part II: Breakdown of Contents by Subject, Munich, 1959.
- International Handbook of Universities*, Paris: International Association of Universities, 1959.
- IVANOV, N., *Higher Technical Training in the U.S.S.R.*, mimeo. series No. 42, New York: Research Program on the U.S.S.R., 1953, esp. pp. 24-26.
- _____, "The Training of Soviet Engineers," *Soviet Education*, G. L. Kline (ed.), London: Routledge and Kegan Paul, 1957, pp. 160-187.
- JARACZ, W. A., and ARMSBY, H. H., *Engineering Enrollments and Degrees, 1953*, Circular No. 387, Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, n.d.
- JASNY, N., *The Soviet Economy during the Plan Era*, Stanford, Calif.: Food Research Institute, Stanford University, Oct. 1951.
- _____, "Soviet Statistics," *Review of Economics and Statistics*, Feb. 1950.
- JONES, L. G., "Education of the Deaf Behind the Iron Curtain: U.S.S.R.," *Volta Review*, Vol. 60 (May 1958), 203-05.
- JOHNSON, W. H. E., "Education in the Soviet Union," in A. H. Moehlman and J. S. Roucek (eds.), *Comparative Education*, New York: The Dryden Press, 1952, pp. 384-413.
- _____, "General Aims of Soviet Education," *American Quarterly on the Soviet Union*, Vol. I, No. 2 (July 1938), 42-51.
- _____, *Russia's Educational Heritage*, Pittsburgh: Carnegie Press, 1950.
- _____, "Teacher Education in the U.S.S.R. and Eastern Europe," *Journal of Teacher Education*, Vol. 7, No. 4 (Dec. 1956), 304-12.
- KAIDANOVA, O., *Ocherki po istorii narodnogo obrazovaniia v Rossii i SSSR na osnove lichnogo opyta i nabliudenii* (Essays on the History of Elementary Education in Russia and the U. S. S. R., on the Basis of Personal Experience), private publishing, 1938.
- _____, *An Historical Sketch of Russian Popular Education* (the English translation of *Ocherki po istorii narodnogo obrazovaniia v Rossii i SSSR na osnove lichnogo opyta i nabliudenii*), Berlin: Petropolis Verlag, 1938, 2 vols.
- KALB, M., *Eastern Exposure*, New York: Farrar, Straus and Cudahy, 1958.
- KANDEL, I. L., *Comparative Education*, Boston: Houghton Mifflin Co., 1938.
- _____, *The New Era in Education, A Comparative Study*, Boston: Houghton Mifflin, 1955.
- KASSIAN, M., "Academic Freedom in Engineering," *Academic Freedom under the Soviet Regime: A Symposium*, Munich: The Institute for the Study of the History and Culture of the U.S.S.R., 1954, pp. 13-16.

- KASSOF, A., "Afflictions of the Youth League," *Problems of Communism*, Vol. 7, No. 5 (Sept.-Oct. 1958), 17-23.
- , "Youth Versus the Regime: Conflict in Values," *Problems of Communism*, Vol. 6, No. 3 (May-June 1957), 15-23.
- KEEZER, D. M. (ed.), *Financing Higher Education, 1960-70*, New York: McGraw-Hill Book Company, Inc., 1959.
- KEONJIAN, E., "Engineering Education Behind the Iron Curtain," *Journal of Engineering Education*, Vol. 45 (April 1955), 593-7.
- KHANIKOV, N., *Études sur l'instruction publique en Russie*, Paris: Gauthier-Villars, 1865.
- KHODZHAEV, A. M., "Methods of University Training in the U.S.S.R.," *University Education in the U.S.S.R.*, Prague: Orbis, 1946, pp. 84-87.
- KING, B., *Russia Goes to School; A Guide to Soviet Education*, London: William Heinemann, Ltd., 1948.
- KLINE, G. L., "Education toward Literacy," *Current History*, Vol. 35, No. 203 (July 1958).
- , "Russia Five Years After Stalin: Education," *The New Leader*, Vol. 41, No. 24, June 16, 1958.
- , "Russia's Lagging School System," *The New Leader*, March 16, 1959, 12-16.
- (ed.), *Soviet Education* (9 essays by former Soviet citizens), New York: Columbia University Press, 1957.
- KOLARZ, W., "Soviet Education and 'the Party'," *London Calling*, Vol. 4 (Mar. 1951), 18-24.
- KORNILOV, A., *Modern Russian History*, 2 vols., New York: Knopf, 1926.
- KOROL, A. (ed.), *Documentary and Reference Material on Education in the Soviet Union*, Communist Bloc Program, Project Education, B/56-2, Center for International Studies, Massachusetts Institute of Technology, Parts I and II, Cambridge, June 1956 (mimeo.).
- , "Soviet Education for Science and Technology," *Second-Rate Brains*, New York: Doubleday News Book, 1958, pp. 20-23.
- , *Soviet Education for Science and Technology*, Cambridge: The Technology Press of the Massachusetts Institute of Technology, and New York: Wiley and Sons, 1957.
- KOURNAKOFF, S., "The Soviet Curriculum," *Education Digest*, Vol. XII, No. 4 (Dec. 1947), 53-55.
- KOUTAISOFF, E., "Soviet Education and the New Man," *Soviet Studies*, Vol. V, No. 2 (Oct. 1953), 103-137.
- , "Soviet Professional Manpower," *Soviet Studies*, Vol. VIII (Oct. 1956), 113-125.
- , "The University of Moscow: A Historical Note," *Universities Quarterly*, Vol. 9 (Aug. 1955), 325-31.
- KOWNACKI, S., "Polytechnical Instruction in Soviet Secondary Schools of General Education," *Journal of Engineering Education*, Vol. 45, No. 10 (June 1955), 787-93.
- KRAMER, J. F. and BROWNE, G., *Contemporary Education: A Comparative Study of National Systems*, New York: Harcourt, Brace and Co., 1956, esp. pp. 160-86, 378-427.
- Kremli i Frantsuzskie sotsialisty* (The Kremlin and the French Socialists), report of the May 1956 meeting of the French Socialist Party Delegates with the members of the Presidium of the Central Committee of the CPSU (translated from the French magazine *Réalités*, May 1957), New York: Research Staff of Radio Liberation, June 1957 (in Russian).
- KUCHERA, J., *Language Policy in the Soviet Union*, unpubl. Ph.D. thesis, Harvard University, 1952.
- KULISHER, E., "Russian Manpower," *Foreign Affairs*, Vol. 31, No. 1 (Oct. 1952), 67-69.
- KUNITZ, J., "Revolution in Soviet Education," *Nation*, Vol. 185 (Oct. 19, 1957), 262-4.
- LANSNER, K. (ed.), *Second-Rate Brains*, New York: Doubleday, 1958.
- LAPP, C. J., "How Little Ivan Goes to School—and Big Ivan to College," *Journal of Engineering Education*, Vol. 47, No. 8 (Apr. 1957), 638-50.
- LAQUEUR, W. Z. and LICHTHEIM, G., *The Soviet Cultural Scene, 1956-1957*, New York: Frederick A. Praeger, 1958.
- LAZAREVICH, I. and N., *L'école soviétique*, Paris: Les Iles d'Or, 1954.
- , *Narodnoe obrazovanie v SSSR: Nachal'naia i sredniaia shkola* (Public Education in the U.S.S.R.: Primary and Secondary School), Munich: Institute for the Study of the U.S.S.R., 1956.
- LEARY, D. B., *Education and Autocracy in Russia. From the Origins to the Bolsheviks*, University of Buffalo, 1919.
- LEFSCHETZ, S., "Scientific Research in the U.S.S.R.: Mathematics," *The Annals of the American Academy of Political and Social Science*, Vol. 263 (1949), 139-40.
- Legislative Reference Service of the Library of Congress, *Communism in Action*, Washington, D.C., 1946, esp. pp. 110-116.
- LEONARD, W., *Child of the Revolution*, Chicago: H. Regnery Co., 1958.
- LEONTIEF, W. W., SR., "Scientific and Technological Research in Russia," *American Slavic and East European Review*, Vol. 4 (1945), 70-79.
- LERCH, M., *Die Ingenieurausbildung in der Sowjetunion*, Bad Godesberg: Der Bundesminister für Atom-Kernenergie und Wasserwirtschaft, 1958.
- LEVIN, D., *Children in Soviet Russia*, London: Faber & Faber, Ltd., 1942.
- , *Soviet Education Today*, New York: John De Graff, 1959.
- LEVINE, H. S., "Small Problem in the Analysis of Growth," *The Review of Economics and Statistics*, Vol. XLII, No. 2 (May 1960), 225-28.
- LEVINE, I. R., "Trouble in Soviet Schools," *The New Leader*, Vol. 42, No. 23 (June 1959).
- LEVIT, M., "Content Analysis of a Soviet History Text for University-Level Courses," *Studies in Comparative Education*, U.S. Office of Education, Dec 1959, 19-29.
- , "Educational Theory in the U.S.S.R., and Some West European Countries," *School and Society*, Vol. 87 (Jan. 17, 1959), 21-24.
- , "Soviet Version of John Dewey and Pragmatism," *History of Education Journal*, Vol. 4, No. 4 (1953), 135-141.
- LILGE, F., *A. S. Makarenko: An Analysis of His Educational Ideas in the Context of Soviet Society*, Berkeley: University of California Press, 1958.
- , "Impressions of Soviet Education," *International Review of Education*, Vol. V, No. 1, 1959, 11-25.
- LINDQUIST, C. B., "Science and Mathematics Education in the U.S.S.R. Today," *School Life*, Vol. 42, No. 3 (Nov. 1959), 8-12.
- LITCHFIELD, E. H. et al., *Report on Higher Education in the Soviet Union*, Pittsburgh: University of Pittsburgh Press, 1958.
- LODGE, N., "Higher Education in Soviet Russia and the New Student," *Educational Yearbook of the International Institute of Teachers College, Columbia University*, I. L. Kandel (ed.), New York: Bureau of Publications, Teachers College, Columbia University, 1934, pp. 293-341.
- LOHWATER, A. J., "Mathematics in the Soviet Union," *Science*, Vol. 125 (May 17, 1957), 974-8.
- LONDON, I. D., "Contemporary Psychology in the Soviet Union," *Science*, Vol. 114, No. 2957 (Aug. 31, 1951), 227-233.
- , "Evaluation of Some Current Literature about Soviet Education," *School and Society*, Vol. 86, No. 2140 (Nov. 8, 1958), 9-16.
- , "A Note on Soviet Science," *The Russian Review*, Vol. 16 (Jan. 1957), 37-41.
- , "Psychology in the U.S.S.R.," *The American Journal of Psychology*, Vol. 64, No. 3 (July 1951), 422-428.
- , "Toward a Realistic Appraisal of Soviet Science," *Bulletin of the Atomic Scientists*, Vol. XIII, No. 5 (May 1957), 169-76.
- LORIMER, F., *The Population of the Soviet Union; History and Prospects*, Geneva: League of Nations, 1946.
- LOWMAN, E. S., "The Case of the Doctored Report," *The Progressive*, Vol. 22, No. 3 (Mar. 1958), 24-28.
- , "Measures Utilized in the U.S.S.R. to Motivate Youth

- into Science-Technology Fields," *The Bulletin of the National Association of Secondary School Principals*, Vol. 41, No. 230 (Sept. 1957), 13-26.
- _____, "Soviet Secondary Education—Designed to Achieve Future Scientific Supremacy," *Higher Education*, Vol. XII, No. 4, Washington, D.C., Dec. 1955.
- MACANDREW, A. R., "Are Soviet Schools Better Than Ours?" *The Reporter*, Vol. XVIII, No. 4 (Feb. 20, 1958), 10-15.
- MACDUFFIE, M., *The Red Carpet*, New York: W. W. Norton & Co., 1955.
- MADDER, T. M., "Some Contrasts between Soviet and American Education," *Social Studies*, Vol. 49 (Mar. 1958), 102-06.
- MALOTT, D. W., "Higher Education—A Challenge from the Soviet Union," *The Educational Record*, Vol. 40, No. 2 (1950), 93-98.
- MARCHENKO, V., *Planirovanie nauchnoi raboty v SSSR* (Planning of Scientific Research in the U.S.S.R.), Munich, 1953.
- MARSHAK, R. E., "Nature of the Soviet Scientific Challenge," *Bulletin of the Atomic Scientists*, Vol. XIV, No. 2 (Feb. 1958), 83-86.
- _____, "Scientific Research in the Soviet Union," a speech to the Research Committee of the National Association of Manufacturers, New York, Oct. 19, 1956.
- Massachusetts Institute of Technology Bulletin, Catalog Issues for 1951-52 and subsequent years, Cambridge: Massachusetts Institute of Technology.
- MAY, A. J., "This Is Moscow University," *School and Society*, Vol. 85 (Oct. 12, 1957), 276-8.
- MAY, M., "The Role of Psychology in Soviet Education" (unpublished mimeo.), 1959.
- MCCCLINTOCK, C. G., *The Competition in Education, U.S. vs. U.S.S.R.*, Technical Military Planning Operation, General Electric Company, Report No. RM 58TMP-57. Santa Barbara, 31 December 1958.
- MCCLOSKEY, H. and TURNER, J. E., *The Soviet Dictatorship*, New York: McGraw-Hill, 1960.
- MEAD, M. (ed.), *Cultural Patterns and Technical Change*, Paris: UNESCO, 1953.
- _____, and CALAS, E., "Child-Training Ideals in a Post-revolutionary Context: Soviet Russia," in M. Mead and M. Wolfenstein, (eds.), *Childhood in Contemporary Cultures*, Chicago: University of Chicago Press, 1955, 279-303.
- MEDLIN, W. K., "Soviet Educational Research: Its Organization and Tasks," *School Life*, Vol. 42, No. 2 (Oct. 1959), 18-21.
- _____, "Soviet Pedagogical Academy and the New School Plan," *Comparative Education Review*, Vol. 2, No. 2 (Oct. 1958), 12-14.
- _____, LINDQUIST, C. B., SCHMITT, M. L., *Soviet Education Programs*, Bulletin 1960, No. 17, Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1960.
- MEER, R. L., "Some Conversations with Soviet Economists," *Soviet Studies*, Vol. VI, No. 3 (Jan. 1955), 238-46.
- _____, "The Teaching of Economics in the U.S.S.R. and Poland," *Soviet Studies*, Vol. X, No. 4 (Apr. 1959), 339-59.
- _____, (ed. and tr.), *Soviet Youth*, London: Routledge and Kegan Paul, 1957.
- MEISSNER, VON BORIS, *Russland im Umbruch*, Frankfurt am Main, 1951.
- MIERNYK, W. H., *Salaries and Income of Engineering Teachers, 1958*, New York: Engineers Joint Council, 1959.
- MILES, D. W., *Russian Education* (Sept. 22, 1958), mimeo. report.
- MISHALOV, I. V., *O podgotovke i usloviakh raboty prepodavatelei sovetskoi shkoly* (Concerning the Preparation and Conditions of Work of Teachers in the Soviet School), Munich: Institute for the Study of the U.S.S.R., 1955.
- MOEHLMAN, A. H., and ROUCEK, J. S. (eds.), *Comparative Education*, New York: The Dryden Press, 1952.
- MONOSZON, E. I., "Educational Information Services in the U.S.S.R.," *Education Abstracts*, Vol. 10 (Jan. 1958), 1-11.
- MOORE, B. J., "Influence of Political Creeds on the Acceptance of Theories," *The Scientific Monthly*, Vol. 79, No. 3 (Sept. 1954), 146-148.
- _____, *Soviet Politics—The Dilemma of Power*, Cambridge: Harvard University Press, 1950.
- _____, *Terror and Progress, U.S.S.R.*, Cambridge: Harvard University Press, 1954.
- MOOS, E., *Higher Education in the Soviet Union*, New York: National Council of American-Soviet Friendship, June 1956 (32 pp.).
- MORGENTHAU, H. J., "Russian Technology and American Policy," *Current History*, Vol. 34, No. 199 (Mar. 1958), 129-35.
- MOSKVIITNOFF, I. J., "Training of Engineers in the U.S.S.R.," Panel Report in J. Pennar (ed.), *Report on the Soviet Union in 1956*, A Symposium of the Institute for the Study of the U.S.S.R., Carnegie International Center, New York, April 28-29, 1956, 77-83.
- MURPHY, F. D., "Some Observations on Soviet Higher Education," *Liberal Education* (Mar. 1959), 5-16.
- MURRAY, H. A. et al., "Some Glimpses of Soviet Psychology," *The American Psychologist*, Vol. 14, No. 6 (June 1959), 303-307.
- NASH, A. S., *The University and the Modern World; an essay in the social philosophy of university education*, London: S.C.M. Press, 1945.
- National Education Association, *Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57*, Washington, D.C.: 1957.
- National Manpower Council, *A Policy for Scientific and Professional Manpower*, New York: Columbia University Press, 1953.
- _____, *A Policy for Skilled Manpower*, New York: Columbia University Press, 1954.
- _____, *Utilization of Scientific and Professional Manpower*, New York: Columbia University Press, 1955.
- NEARING, S., *Education in Soviet Russia*, New York: International Publishers, 1926.
- National Science Foundation, *American Science Manpower: Employment and Other Characteristics, 1954-55*, NSF 59-39, Washington, D.C.: U.S. Government Printing Office, 1959.
- _____, *Proceedings of a Conference on Research and Development and Its Impact on the Economy*, Washington, D.C.: U.S. Government Printing Office, 1958.
- _____, *Scientific Manpower 1958*, Papers of the Seventh Conference on Scientific Manpower, Symposium on Demographic and Sociological Aspects of Scientific Manpower, Washington, D.C., U.S. Government Printing Office, 1959.
- _____, *Scientific Manpower Bulletin*, Washington, D.C., various issues.
- _____, *Scientific Personnel Resources, A Summary of Data on Supply, Utilization, and Training of Scientists and Engineers*, Washington, D. C., May 1954 (mimeo., unpubl. report).
- _____, *Scientific and Technical Personnel in American Industry*, Report on a 1959 Survey, Washington, D.C.: U.S. Government Printing Office, 1960.
- _____, *Statistical Handbook of Science Education*, Washington, D.C.: U.S. Government Printing Office, 1960.
- _____, Office of Science Information Service, *Providing U.S. Scientists with Soviet Scientific Information*, Washington, D.C., May 1959.
- NEEDHAM, J., and DAVIES, J. S. (eds.), *Science in Soviet Russia*, London: Watts & Co., 1942.
- NEWMAN, H. H., Cardinal, *The Idea of a University Defined and Illustrated*, London: Longmans, Green, 1923.
- NIKODIMOV, I., *O politekhnicheskoi obrazovanii v SSSR* (Concerning Polytechnical Education in the U.S.S.R.), Munich: Institute for the Study of the U.S.S.R., 1957.
- NOVGOROTSEV, P., "Universities and Higher Technical Schools," *Russian Schools and Universities in the World War*, New Haven: Yale University Press, 1929.
- Novoe Russkoe slovo* (New Russian Word) (New York) (daily newspaper).
- OBOURN, E. S., "Science and Mathematics in the Soviet Ten-

- Year School," *School Science and Mathematics*, Vol. 58 (Oct. 1958), 514-17.
- OE-U.S.S.R. (abbreviation). For full title, see U.S. Department of Health, Education, and Welfare, Office of Education, *Education in the U.S.S.R.* . . .
- The Organization of Applied Research in Europe, the United States and Canada*, in three volumes: I. *A Comparative Study*; II. *Applied Research in Europe*; III. *Applied Research in the United States and Canada*. Published by the Organization for European Economic Cooperation, Paris, 1954.
- ORNSTEIN, J., "Foreign Language Training in the Soviet Union—A Qualitative View," *The Modern Language Journal*, Vol. XLII, No. 8 (Dec. 1958), 382-392.
- , "Soviet Language Policy: Theory and Practice," *The Slavic and East European Journal*, Vol. XVII (1959), 1-24.
- OSTER, G., "Scientific Research in the U.S.S.R.," *The Annals of the American Academy of Political and Social Science*, Vol. 263 (May 1949), 134-140.
- OTAVA, K. J., NEWMAN, L. L., PIRET, E. L., and PASSER, M. (eds.), *Minnesota Peat Mission to Europe*, Report of the Minnesota Technical Mission to the U.S.S.R. and Other European Nations, St. Paul, Minn.: Iron Range Resources and Rehabilitation, August 1958.
- OXTOBY, T., et al., "Enrollment and Graduation Trends: From Grade School to Ph.D.," *School and Society*, Vol. 76 (Oct. 11, 1952), 225-231.
- PARES, B., *A History of Russia*, New York: Knopf, 1952.
- PARKER, F., "The New Curriculum in Soviet Schools," *Slavic and East European Journal*, Vol. 15 (fall 1957), 211-19.
- , "The Teaching of English in a Soviet Middle School," *The Modern Language Journal*, XLI (May 1957), 229-33.
- PENNAR, J. (ed.), "Contemporary Soviet Science," *Report on the Soviet Union in 1956* (Symposium, Proceedings of the Seventh Institute Conference, Carnegie International Center, 1956), 63-99.
- PERRY, C. C., et al., "Underground View of Russian Engineering Education," *Journal of Engineering Education*, Vol. 47 (April 1957), 683-9.
- PETERS, V., "Education in the Soviet Union," *Phi Delta Kappan*, Vol. 37 (June 1956), 421-5.
- PINKEVITCH, A. P., "Methods of Work of the Higher Educational Institutions in Soviet Russia," *School and Society*, Vol. XXXII (Sept. 27, 1930), 425-427.
- , *The New Education in the Soviet Republic*, ed. by G. S. Counts, New York: The John Day Co., 1929.
- , *Science and Education in the U.S.S.R.*, New York: Putnam, 1935.
- PIPES, R., "The Historical Evolution of the Russian Intelligentsia," *Daedalus*, Summer 1960, 487-502.
- , "The Nationalities," *The New Leader* (Russia 5 Years After Stalin series, No. 4), (April 14, 1958), 15-18.
- PIRET, E. L., "A Chemical Engineer Visits the U.S.S.R.," *Chemical Engineering Progress*, Vol. 53, No. 12 (Dec. 1957), 19-22.
- and PASSER, M., *A Soviet Technological Institute: The Moscow Peat Institute*, presented before the Division of Chemical Education at the 136th Meeting of the American Chemical Society, Sept. 1959.
- PLOSS, S. I., "Political Education in the Postwar Komsomol," *American Slavic and East European Review*, Vol. 15, No. 4 (Dec. 1956), 489-505.
- A Program for National Information on Scientific and Technical Personnel*, Washington, D. C.: National Science Foundation, August 1958.
- RABINOWITCH, E., "Soviet Science—A Survey," *Problems of Communism*, Vol. VII, No. 2 (March-April, 1958), 1-9.
- , "U.S.S.R. Exchange of Scientific Information," *Bulletin of the Atomic Scientists*, Vol. VIII, No. 2 (Feb. 1952), 48-49.
- RAEFF, M., "Report on Russia's Big Red School House," *New York Times Magazine*, June 22, 1958.
- RAJAMAA, H., *The Moulding of Soviet Citizens; A Glance at Soviet Educational Theory and Practice*, London: Boreas Publishing Co., 1948 (East and West Series No. 4).
- READ, G. H., "The Big Reform in Soviet Education," *Phi Delta Kappan*, Vol. 40, No. 5 (Feb. 1959).
- , "Soviet Education in a Course on Comparative Education," *School and Society*, Vol. 86 (Nov. 8, 1958), 16-19.
- , "Soviet Educators Have Problems Too," and "Excerpts from a Russian Diary," *Phi Delta Kappan*, Vol. 39 (June 1958), 386-88, 389-93.
- REDDING, A. D., "Comparison of Volume and Distribution of Nonagricultural Employment in the U.S.S.R., 1928-55, with the U.S., 1870-1952," *The Review of Economics and Statistics*, Vol. XXXVI, No. 4 (Nov. 1954), 444-450.
- , "Volume and Distribution of Nonagricultural Employment in the U.S.S.R., 1928-55," *The American Slavic and East European Review*, Vol. XIII, No. 3 (Oct. 1954), 356-367.
- "Reform of Teaching Methods in Soviet Universities," *School and Society*, XXII (Aug. 8, 1925), 163.
- RENFIELD, R. L., *Soviet Criticism of Soviet Education. Some Soviet Attitudes on Aspects of the Ten-Year School which Certain Americans Have Praised*, Washington: Educational Policies Commission, May 11, 1959 (mimeo.).
- , "The Soviets Are Criticizing Their Schools," *Journal of National Education Association*, Vol. 48 (Mar. 1959), 22-25.
- RIAZANOVSKII, V. A., *Razvitie russkoi nauchnoi mysli* (Development of Russian Scientific Thought), private publication, 1949.
- RICE, S. A., "Statistics in the Soviet Union," *Bulletin of the Atomic Scientists*, Vol. VIII, No. 5 (June 1952), 159-162.
- RICKOVER, H. G., *Education and Freedom*, New York: E. P. Dutton & Co., Inc., 1959.
- , *Report on Russia*, Hearings before the Committee on Appropriations, HR, 86th Cong., 1st Sess., Washington, D. C.: U.S. Government Printing Office, 1959.
- Rockefeller Report, *The Pursuit of Excellence—Education and the Future of America*, New York, Doubleday, 1958.
- ROGGER, H., "Frustration and Boredom in Russian Youth," *The Reporter*, Vol. XVIII, No. 14 (Feb. 20, 1958), 17-20.
- ROMANOFF, S., "Dialectical Materialism and the Exact Sciences," *Academic Freedom under the Soviet Regime: A Symposium*, Munich, The Institute for the Study of the History and Culture of the U.S.S.R., 1954, pp. 9-13.
- ROOF, M. K., "Recent Trends in Soviet Internal Migration Policies," *R.E.M.P. Bulletin*, Vol. 8, No. 1 (Jan.-Mar. 1960), 1-18.
- ROSOW, I., *Aspects of Soviet Education*, Cambridge: Russian Research Center, Harvard University, March 1953 (unpubl. mimeo. report).
- , *Educational Patterns in the Soviet Union*, Cambridge: Russian Research Center, Harvard University, March 1954 (unpubl. mimeo. report). (A report submitted to the Director, Office Education Research Laboratory, Maxwell Air Force Base, Montgomery, Ala.)
- ROSSI, P. H. and INKELES, A., "Multidimensional Ratings of Occupations," *Sociometry*, Vol. 20, No. 3 (Sept. 1957), 234-251.
- ROSTOW, W. W., *The Dynamics of Soviet Society*, New York: W. W. Norton & Co., Inc., 1953.
- RUBINSHEIN, S. L., "Psychological Science and Education," *Harvard Educational Review*, Vol. XVIII, No. 3 (Summer 1948), 158-170.
- RYWKIN, M. S., "Incentives in the Soviet Schools," *Comparative Education Review*, Vol. 2 (June 1958), 19-21.
- SASNETT, M. T., *Educational Systems of the World*, Berkeley: University of California Press, 1953, esp. pp. 693-706.
- SCHLESINGER, R., "The Educational Reform," *Soviet Studies*, Vol. X, No. 4 (Apr. 1959), 432-44.
- SCHMITT, M. L., "Practical Work—An Essential Part of Soviet Education," *School Life*, Vol. 42, No. 3 (Nov. 1959), 13-17.
- SCHWARTZ, H., "A Critique of 'Appraisals of Russian Economic Statistics,'" *The Review of Economics and Statistics*, Feb. 1948.
- , *Russia's Soviet Economy*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 2d ed., 1958.

- Scientific Manpower*, papers and proceedings of annual conferences, Washington, D. C.: National Science Foundation, annual volumes 1953 through 1959.
- Scuola e Pedagogia nell'URSS*, Atti del Convegno di Studi sulla Scuola e la Pedagogia Sovietica, Siena, 8-9 Dicembre 1951.
- SENN, M. J. E., "Russian Children and Their World," *Child Study*, Vol. 36 (Winter 1958-59), 7-13.
- SHIMKIN, D., "Scientific Personnel in the U.S.S.R.," *Science*, Vol. 116, No. 3019 (Nov. 7, 1952), 512-513.
- , and LEEDY, F. A., "Soviet Industrial Growth," *Automotive Industries*, Vol. 118, No. 1 (Jan. 1, 1958), 48-59.
- SHIMKIN, M. B., "Medical Education in the Soviet Union," in *American Review of Soviet Medicine*, Vol. 1, No. 5 (June 1944), American-Soviet Medical Society, pp. 465-480.
- SHORE, M. J., *Soviet Education: Its Psychology and Philosophy*, New York: Philosophical Library, 1947.
- SIEMIENOW, G., "Teaching of Chemistry in Soviet Secondary Schools," *Proceedings of the Pennsylvania Academy of Science*, Vol. XXXIII (1959), 106-119.
- SIGERIST, H. E., *Medicine and Health in the Soviet Union*, New York: The Citadel Press, 1947, esp. pp. 54-79.
- SIMMONDS, C. E., *Technical Education in the U.S.S.R.*, London: Society for Cultural Relations with the U.S.S.R., 1957.
- SIMMONS, E. J. (ed.), *Continuity and Change in Russian and Soviet Thought*, Cambridge: Harvard University Press, 1955.
- SKORODUMOV, V., *Struktura rukovodstva sovetsoi shkolo* (Structure of Administration of Soviet Schools), Munich: Institute for the Study of the History and Culture of the U.S.S.R., 1955.
- SMITH, H., *The Purposes of Higher Education*, New York: Harper & Brothers, 1955.
- SNOWDEN, F. M., JR., "Observations on Some Soviet Textbooks for English Language Instruction," *The Educational Record*, April 1960, 1-13.
- SORENSEN, C. W., "Social Studies in Soviet Schools: Grades I-IV," *Social Education*, Vol. 23 (Mar. 1959), 103-06, 110.
- "Soviet Technical Colleges before the Reform," *Bulletin of the Institute for the Study of the History and Culture of the U.S.S.R.*, Vol. 1, No. 9 (Dec. 1954), 29-32.
- "The Soviet Union: Education at Mid-Century," *Current History*, Vol. 35 (July 1958), 1-39.
- "The Soviet Union as Reported by Former Soviet Citizens," A series of reports released through the Department of State, Office of Intelligence Research, Washington, D. C., various dates since 1953.
- "Specialist Training in the U.S.S.R.," *The Times Educational Supplement* (London), April 29, 1955.
- *SPM (abbreviation). For full title, see DeWitt, N., *Soviet Professional Manpower* . . .
- "Sport Schools, Sports and Physical Education in the U.S.S.R.," *Foreign Education Digest*, Vol. 23 (July-Sept. 1958), 44-47.
- STARR, A., "Medical Education in Soviet Russia," *Journal of Medical Education*, Vol. 33, No. 12 (Dec. 1958), 827-836.
- The State of Russian Science Today: A symposium*, Part I. I. T. Dobzhansky, "Lysenko's 'Michurinist' Genetics"; II. J. R. Kline, "Soviet Mathematics," in *Bulletin of the Atomic Scientists*, Vol. VIII, No. 2 (Feb. 1952), 40-47. Part II. I. K. Lonsdale, "Impressions from a Recent Moscow Visit"; II. I. D. London, "Soviet Psychology and Psychiatry"; Part III. E. Rabinowitch, "Science and Scientists in Russia," in *Bulletin of the Atomic Scientists*, Vol. VIII, No. 3 (Mar. 1952), 66-78.
- STIGLER, G. J., *Employment and Compensation in Education*, Occasional Paper 33, New York: National Bureau of Economic Research, Inc., 1950.
- STORY, R. C., and ARMSBY, H. H., *Engineering Enrollments and Degrees, 1951*, Circular No. 338, Washington, D. C.: Federal Security Agency, Office of Education, Feb. 15, 1952 (mimeo. report).
- , *Engineering Enrollments and Degrees, 1952*, Circular No. 364, Washington, D. C.: Federal Security Agency, Office of Education, Jan. 21, 1953 (mimeo. report).
- Strengthening Science Education for Youth and Industry: Proceedings of the Seventh Thomas Alva Edison Foundation Institute*, Nov. 19-20, 1956, N. Y.: New York University Press, 1957. (Science Education in Russia: The Qualitative Aspect.)
- SULLIVAN, J. W. N., *The Limitations of Science*, The Viking Press, Inc., 1949 (Mentor ed.).
- SWEARINGEN, R., "Asian Studies in the Soviet Union," *Journal of Asian Studies*, Vol. 17 (May 1958), 515-37.
- TANDLER, F. M., *The Workers' Faculty (Rabfak) System in the U.S.S.R.*, unpubl. Ph.D. dissertation (Publication No. 12,476), Columbia University, 1955 (mimeo.).
- TASKIN, G. A., *Geographic Studies in Soviet Universities and Teachers' Colleges*, mimeo. series No. 64, in Russian, New York: Research Program on the U.S.S.R., 1954.
- TIMASHEFF, N. S., *The Great Retreat*, New York: E. P. Dutton and Co., Inc., 1946.
- , "Higher Education for What?" *Journal of Educational Sociology*, Vol. 29 (Oct. 1955), 75-82.
- , "The Postwar Population of the Soviet Union," *American Journal of Sociology*, Vol. LIV, No. 2 (Sept. 1948), 148-155.
- , "Soviet Education's New Look," *Current History*, Vol. 39 (Jan. 1956), 20-5.
- TIMOSHENKO, S. P., "Development of Engineering Education in Russia," *Russian Review*, Vol. 15 (July 1956), 173-85.
- , *Engineering Education in Russia*, New York: McGraw-Hill, 1959.
- TOLPIN, J. G., "Chemical Engineering in the U.S.S.R.," *Chemical Engineering Progress*, Vol. 54, No. 8 (Aug. 1958), 70-76.
- , "Engineering Education in the Soviet Union," *Journal of Engineering Education*, Vol. 34 (Oct. 1943).
- TRILLING, L., "Russian Engineering Education," *Aviation Week*, Vol. 65, 50-3, Aug. 20; 48-50, Aug. 27; 58-9, Sept. 3; 57-8, Sept. 10, 1956.
- , *Soviet Education in Aeronautics: A Case Study*. Cambridge: Center for International Studies, MIT, 1955 (mimeo.).
- TRUMP, J. L., *Images of the Future: A New Approach to the Secondary School*, Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, Urbana, Ill., 1959.
- TRYTTEN, M. H., "Engineering Education in Russia," speech before the Fall Annual Meeting of the American Society of Mechanical Engineers, Milwaukee, Sept. 8, 1954.
- , "Our Technical Manpower Situation Today," speech before the Military Industrial Conference on Technical Manpower, Chicago, Feb. 10, 1955.
- , "Science and Engineering in the U.S.S.R. and the U.S.A.: A Comparison and Appraisal," speech at the Drexel Institute of Technology, Philadelphia, n.d.
- TUCKER, R. C., *Impressions of Russia in 1958: A Trip Report*, No. P-1570, Santa Monica: The Rand Corporation, Nov. 30, 1958.
- TURKEVICH, J., "Science Education in Russia: The Qualitative Aspect," *Strengthening Science Education for Youth and Industry*, Proceedings of the Seventh Thomas Alva Edison Foundation Institute, Nov. 19-20, 1956, New York: New York University Press, 1957, pp. 112-114.
- , "The Scientists in the U.S.S.R.," *Atlantic Monthly*, Vol. 201 (Jan. 1958), 45-9.
- , "Soviet Physics and Chemistry," *Chemical and Engineering News*, Vol. 30 (July 7, 1952), 2792-97.
- , "Soviet Science in the Post-Stalin Era," *The Annals of the American Academy of Political and Social Science*, Vol. 303 (Jan. 1956), 139-51.
- , "The Soviet's Scientific Elite," *Saturday Review*, Mar. 24, 1956.
- TURKEVICH, L. B., "Status of Spanish Studies in the Soviet Union," *Hispania*, Vol. 41 (Dec. 1958), 485-90.
- Ufficio di Legislazione Scolastica Comparata, *La Scuola del Mondo*: URSS, Torino: G. B. Paravia, 1949.

- UNESCO, Commission on the Status of Women, *Access of Women to Higher Education*, No. 58-01732, Jan. 28, 1958.
- _____, *Education in a Technological Society*, Tensions and Technology series, Paris, 1952.
- _____, "Union of Soviet Socialist Republics," *Rural Education*, Vol. 10 (Sept.-Oct. 1958), 13-140.
- U.S. Bureau of the Budget, Office of Statistical Standards, *Standard Industrial Classification Manual*, Washington, D.C.: U.S. Government Printing Office, 1957, *passim*.
- U.S. Congress, Committee on Appropriations, *Comparison of United States and U.S.S.R. Science Education*, House of Representatives, 86th Cong., 2d Sess., Washington, D. C.: U.S. Government Printing Office, 1960 (National Science Foundation report).
- _____, Committee on Foreign Relations, *United States Foreign Policy: U.S.S.R. and Eastern Europe* (Columbia-Harvard Research Group), 86th Cong., 2d Sess., Washington, D. C.: U.S. Government Printing Office, Feb. 14, 1960.
- _____, Committee on Government Operations, Subcommittee on Reorganization and International Organizations, *The Federal Government's Foreign Training Programs*, Report No. 153, 86th Cong., 1st Sess., Washington, D. C.: U.S. Government Printing Office, 1959.
- _____, Joint Committee on Atomic Energy, *Engineering and Scientific Manpower in the United States, Western Europe and Soviet Russia*, 84th Congress, 2d Session, Washington, D. C.: U.S. Government Printing Office, March 1956.
- _____, Joint Committee on Atomic Energy, *Shortage of Scientific and Engineering Manpower, Hearings before the Subcommittee on Research and Development*, 84th Cong., 2d session, Washington, D. C.: U.S. Government Printing Office, April-May 1956.
- _____, Joint Committee on the Economic Report, *Trends in Economic Growth: A Comparison of the Western Powers and the Soviet Bloc*, 83d Cong., 2d Sess., Washington, D. C.: U.S. Government Printing Office, 1955.
- _____, Joint Economic Committee, *Comparisons of the United States and Soviet Economies*, Parts I, II and III, 86th Cong., 1st Sess., Washington, D. C.: U.S. Government Printing Office, 1959.
- _____, Joint Economic Committee, *Soviet Economic Growth: A Comparison with the United States*, 85th Cong., 1st Session, Washington, D. C.: U.S. Government Printing Office, 1957, esp. pp. 84-106.
- _____, Subcommittee on Technical Assistance Programs, *Soviet Technical Assistance*, Staff Study No. 7, 84th Cong., 2d Session, Washington, D. C.: U.S. Government Printing Office, 1956.
- U.S. Department of Agriculture, Agricultural Research Service, *Veterinary Science in the Soviet Union*, Report of a Technical Study Group, Washington, D. C.: U.S. Government Printing Office, Oct. 1959.
- U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, Washington, D. C.: U.S. Government Printing Office, annual volumes 1950 through 1959.
- _____, *Current Population Reports, Population Characteristics*, Series P-20, No. 99, Feb. 4, 1960.
- _____, 16th Census of the United States: 1940, (1) *Population: The Labor Force, Employment and Personal Characteristics*; (2) *Population: The Labor Force, Occupational Characteristics*; (3) *Population: The Labor Force, Industrial Characteristics*; (4) *Population: Education, Educational Attainment by Economic Characteristics and Marital Status*, Washington, D. C.: U.S. Government Printing Office, 1943, 1943, 1943, and 1947, respectively.
- _____, *United States Census of Population: 1950: Special Reports* (1) *Education*; (2) *Occupation by Industry*; (3) *Industrial Characteristics*, (4) *Occupational Characteristics*, Washington, D. C.: U.S. Government Printing Office, 1953, 1954, 1955, and 1956 respectively.
- U.S. Dept. of Health, Education and Welfare, Office of Education, *Bibliography of Published Materials on Russian and Soviet Education: A Research and Reference Tool*, Studies in Comparative Education, Washington, D. C.: U.S. Government Printing Office, 1960.
- _____, *Bibliography: 1958 Publications, Studies in Comparative Education*, Washington, D. C.: U.S. Government Printing Office, 1959, pp. 35-48.
- _____, *Earned Degrees Conferred by Higher Educational Institutions*, annual issues from 1952-53 to 1959-60, Washington, D. C.: U.S. Government Printing Office, published in the respective year.
- _____, *Education in the United States of America*, Special Series No. 3, revised 1955, Washington, D. C.: U.S. Government Printing Office, 1955.
- * _____, *Education in the U.S.S.R.* (Bulletin 1956, No. 14), Washington, D. C.: U.S. Government Printing Office, 1957. Coded in the text as OE-U.S.S.R.
- _____, H. H. Armsby, *Engineering and Scientific Manpower*, OE-50003, Circular No. 610, Washington, D. C.: U.S. Government Printing Office, 1960.
- _____, *Faculty in Institutions of Higher Education*, Circular 504, Washington, D. C.: U.S. Government Printing Office, May 1957.
- _____, *Final Examinations in the Russian Ten-Year School*, No. 6, Oct. 1958.
- _____, K. G. Heath (comp.) *Bibliography: 1956 Publications, Studies in Comparative Education*, Washington, D. C.: U.S. Government Printing Office, 1957, pp. 35-36.
- _____, K. G. Heath (comp.), *Bibliography: 1957 Publications, Studies in Comparative Education*, Washington, D. C.: U.S. Government Printing Office, 1958, pp. 88-93.
- _____, *Higher Education* (monthly-Sept.-June).
- _____, *Progress of Public Education in the United States of America*, Washington, D. C.: U.S. Government Printing Office, 1960.
- _____, *Report on New Source Book on Soviet Higher Education*, No. 2, July 1958.
- _____, I. Remer and W. K. Medlin (comp.), *Selected Bibliography of Research Materials on Education in the U.S.S.R.*, No. 1, June 1958.
- _____, *Soviet Commitment to Education*, Report of the First Official U.S. Education Mission, Bulletin 1959 No. 16, Washington, D. C.: U.S. Government Printing Office, 1959.
- _____, *Teaching in the Social Sciences and Humanities in the U.S.S.R.*, Studies in Comparative Education series, Washington, D. C.: U.S. Government Printing Office, Dec. 1959, 31-41.
- _____, *Textbooks for Russian Schools*, No. 3, July 1958.
- _____, Public Health Service, *The Report of the United States Public Health Mission to the Union of Soviet Socialist Republics* (August 13 to September 14, 1957), Washington, D. C.: U.S. Government Printing Office, 1959.
- U.S. Dept. of Labor, Bureau of Labor Statistics, *Employment, Education, and Income of Engineers, 1949-50*, Washington, D. C.: U.S. Government Printing Office, November 1952.
- _____, *Employment Outlook for Technicians*, A Report on Draftsmen, Engineering Aides, Laboratory Technicians, and Electronic Technicians, Occupational Outlook Series, Bull. No. 1311, Washington, D. C.: U.S. Government Printing Office, April 1953.
- _____, *Fact Book on Manpower*, Washington, D. C.: U.S. Government Printing Office, Jan. 31, 1951; and Sept. 1954.
- _____, *Manpower Resources in Chemistry and Chemical Engineering*, Bull. No. 1132, Washington, D. C.: U.S. Government Printing Office, Feb. 1953.
- _____, Division of Manpower and Employment Statistics, "Engineering Personnel Employed in Metalworking Industries," *Monthly Labor Review*, May 1954, 526-530.
- _____, in cooperation with the U.S. Dept. of Defense, *Scientific Research and Development in American Industry, A Study of Manpower and Costs*, Bull. No. 1148, Washington, D. C.: U.S. Government Printing Office, Oct. 1953.
- _____, Research and Development Board, *Industrial Research and Development; A Preliminary Report*, Washington, D. C.: U.S. Government Printing Office, Jan. 1953.
- U.S. Dept. of State, *Notes, Soviet Affairs*, "The Soviet Education System," No. 190, April 27, 1956; "Education in

- the Soviet Union," No. 214, Aug. 29, 1957; "Soviet Statistical Claims," No. 228, Dec. 29, 1958; "Social Ills in the Communist Bloc," No. 238, Mar. 1, 1960.
- _____, "Thought Control in the Soviet Union: Part I, The Educational System," vol. 25, No. 645 (Nov. 5, 1951), pp. 719-22. Part II, "Science and Scholarship," Vol. 25, No. 648 (Nov. 26, 1951), 844-51, *The Department of State Bulletin*.
- _____, Division of Research for Europe, "Soviet Wartime Measures concerning Students in Technical and Higher Educational Institutions," *DRE Information Paper EER-84*, Sept. 25, 1950.
- _____, OIR, "The Current Status of Soviet Education," *Intelligence Report*, No. 6314, Washington, D. C., July 28, 1953.
- _____, "Recent Trends in Soviet Schools," *Intelligence Report*, No. 6685, Washington, D. C., Sept. 10, 1954.
- _____, OIRA, "Soviet Language and Area Programs for Asia and Africa," *Intelligence Report*, No. 7783, Washington, D. C., August 5, 1958.
- _____, "Soviet Manpower Deficit, Abstract," *Intelligence Report*, No. 7506, May 13, 1957.
- U.S. Federal Security Agency, Office of Education, *Earned Degrees Conferred by Higher Educational Institutions, 1950-51*, Circular No. 333, Washington, D. C.: U.S. Government Printing Office, Feb. 1952.
- _____, *Education in the U.S.S.R. and in Imperial Russia—Selected References*, Washington, D. C.: U.S. Government Printing Office, 1940.
- _____, *Information Bulletin*, various issues, Washington, D. C.
- _____, *The Teaching of Science in Public High Schools*, Bulletin 1950, No. 9, Washington, D. C.: U.S. Government Printing Office, 1950.
- _____, Social Security Administration, Bureau of Employment Security, *Dictionary of Occupational Titles*, Vol. I: *Definitions of Titles*; Vol. II: *Occupational Classification and Industry Index*, 2d ed. Washington, D. C., U.S. Government Printing Office, 1949.
- U.S. Office of Education, "Education in Russia," *Annual Report of the Commissioner of Education*, Washington, D. C.: U.S. Government Printing Office, 1912, pp. 579-87.
- _____, "School of Viticulture in Russia," *Annual Report of the Commissioner of Education*, Washington, D. C.: U.S. Government Printing Office, 1910.
- UTECHIN, S. V., "Education in the U.S.S.R.," *The Political Quarterly*, Vol. XXIX (Oct.-Dec. 1958), 323-337.
- VOLIN, L., "Science and Intellectual Freedom in Russia," *Soviet Science*, Washington: American Association for the Advancement of Science, 1952, 85-99.
- VOLPICELLI, L., *L'Evolution de la Pédagogie Soviétique*, Neuchâtel: Delachaux et Niestlé, 1954.
- _____, (ed.), "La Scuola e la Pedagogia Sovietica," *I Problemi della Pedagogia*, Vol. 2, No. 45 (July-Oct. 1956).
- _____, *Storia della Scuola Sovietica*, 2 ed., Milano: La Scuola, 1951.
- VON RAUCH, G., "Intellectual Freedom in the U.S.S.R.?" *Science and Freedom*, Manchester, England: December 1955.
- _____, "Die Hochschulen der Sowjetunion," *Osteuropa*, Vol. I (Feb. 1952), 1-8.
- _____, "Khrushchev and the Thaw," *Science and Freedom*, Manchester, England, August 1956.
- VUCINICH, A., *The Soviet Academy of Sciences*, Hoover Institute Studies, Series E., Institutions, No. 3., Stanford: Stanford University Press, 1956.
- WALLACE, R., "First Hand Facts on All Russian Science," *Life*, Vol. 43 (Dec. 16, 1957), 108-22.
- WALSH, W. B., "Some Notes on Mathematics and Mathematicians in the Soviet Union," unpubl. mimeo. report, 1959.
- WATERMAN, A. T., "Russian Science Threatens the West," *Nation's Business*, Sept. 1954.
- Wentworth Institute *Bulletin of Day Courses, 1960-61*, Boston: Wentworth Institute, 1960.
- WETTER, G. S.J., "Dialectical Materialism and Natural Science," *Soviet Survey*, No. 23 (Jan.-Mar. 1958), 51-59.
- WHITEHEAD, A. N., *The Aims of Education*, The Macmillan Co., 1929 (Mentor edition).
- _____, *Science and the Modern World*, The Macmillan Co., 1952 (Mentor ed.)
- WIDMAYER, R., *The Communist Party and the Soviet Schools, 1917-37*, unpubl. Ph.D. thesis, Radcliffe College, 1952.
- _____, "Evolution of Soviet Educational Policy," *Harvard Educational Review*, Vol. 24, No. 3 (1954), 159-75.
- WILLOUGH, J. T., "New Models in Soviet Education," *Comparative Education Review*, Vol. 3, No. 2 (Oct. 1959).
- WITTIG, H., "Die Marx'sche Bildungskonzeption und die zweite 'Polytechnisierung' der Sowjetschule," *Das Parlament*, Dec. 10, 1958.
- _____, "Marx on Education: Philosophical Origins of Communist Pedagogy," *Soviet Survey*, No. 30 (Oct.-Dec. 1959), 77-81.
- WOLFLE, D., *America's Resources of Specialized Talent* (Report of the Commission on Human Resources and Advanced Training), New York: Harper & Bros., 1954.
- WOODY, T., "The Significance of Knowing about Soviet Education," *School and Society*, Vol. 86 (Nov. 8, 1958), 3-9.
- World Survey of Education, *Handbook of Educational Organizations and Statistics*, Paris: UNESCO, 1955.
- WRINCH, P. N., "Science and Politics in the U.S.S.R.: The Genetics Debate," *World Politics*, Vol. III, No. 4 (July 1951), 484-519.
- WRISTON, H. M., "Education and the National Interest," *Foreign Affairs*, Vol. 35 (July 1957), 564-80.
- YANOWITZ, M., "Changes in the Soviet Money Wage Level since 1940," *The American Slavic and East European Review*, Vol. XIV, No. 2 (April 1955), 195-223.
- _____, "Trends in Differentials between Salaried Personnel and Wage Workers in Soviet Industry," *Soviet Studies*, Vol. XI, No. 3 (Jan. 1960), 229-52.
- _____, "Trends in Soviet Occupational Wage Differentials," *Industrial and Labor Relations Review*, Vol. 13, No. 2 (Jan. 1960), 166-91.
- ZAMSKA, I. D., "Academic Freedom and Economic Science in the U.S.S.R.," *Academic Freedom under the Soviet Regime; A Symposium*, Munich: Institute for the Study of the History and Culture of the U.S.S.R., 1954, pp. 41-46.
- ZIRKLE, C. (ed.), *Death of a Science in Russia*, Philadelphia: University of Pennsylvania Press, 1949.
- _____, and MEYERHOFF, H. A. (arrangers), *Soviet Science*, a symposium presented on Dec. 27, 1951, at the Philadelphia meeting of the American Association for the Advancement of Science, Washington, D. C.: AAAS, 1952.
- ZHUKOV, E., "Moskovskie studenty" (Students of Moscow), *Novoe Russkoe Slovo* (New Russian Word), New York, May 5, 1958.

PART II.—Primary Sources

- ABDULLAEV, KH. M., *Sorok let sovetskoi nauki v Uzbekistane* (Forty Years of Soviet Science in Uzbekistan), Tashkent, 1958.
- AFANAS'EV, V. and PAKHOMOVA, A., *Partiinaiia organizatsiia shkoly* (Party Organization in the School), Rostov-on-Don, 1954.
- AGANBEGIAN, A. G., and MAIER, V. F., *Zarobotnaia plata v SSSR* (Wages in the U.S.S.R.), Moscow, 1959.
- Akademiia Nauk SSSR (Academy of Sciences of the U.S.S.R.), *220 let Akademii Nauk SSSR* (220 Years of the Academy of Sciences of the U.S.S.R.), Moscow, 1945.
- _____, *Nauchnye kadry v SSSR* (Research Cadres of the

- U.S.S.R.), Moscow, 1959 (Collection of decrees and regulations concerning research personnel).
- _____, I. P. BARDIN (ed.), *Sovetskaia tekhnika za dvadtsat' piat' let* (Soviet Technology for 25 Years), Moscow, 1945.
- _____, N. A. FIGUROVSKII (ed.), *Istoriia estestvoznaniia v Rossii* (History of Natural Sciences in Russia), Vol. I, Parts 1 and 2, Moscow, 1957.
- _____, V. K. OSTROVITIANINOV (ed.), *Voprosy stroitel'stva kommunizma v SSSR* (Problems of Building Communism in the U.S.S.R.), Moscow, 1959.
- _____, A. V. TOPCHIEV (ed.), *Nauchnye kadry v SSSR—Sbornik dokumentov i spravocnykh materialov* (Research Personnel in the U.S.S.R.—Compilation of Decrees and Information Materials), Moscow, 1959.
- _____, Institut Ekonomiki (Institute of Economics), *Ekonomika promyshlennosti SSSR* (Economics of Industry in the U.S.S.R.), Moscow, 1956.
- Akademii Obshchestvennykh Nauk pri TsK KPSS (Academy of the Social Sciences of the Central Committee of the Communist Party of the Soviet Union), A. G. Kulikov (ed.), *Iz opyta raboty sovmarkhozov i razvitiia khoziaistva raionov* (The Experiences of Work of the Regional Economic Councils and the Development of the Economies of the Regions), Moscow, 1959.
- Akademii Pedagogicheskikh Nauk RSFSR (Academy of Pedagogical Sciences of the Russian SFSR), *Natsionalnye shkoly RSFSR* (National Schools of the RSFSR), Moscow, 1958.
- _____, *Razvitie logicheskogo myshleniia v protsesse obucheniia v nachal'noi shkole* (Development of Logical Thought in the Process of Education in the Elementary School), Moscow, 1956.
- _____, *Shkolovedenie* (Manual on School Administration), Moscow, 1957.
- _____, A. I. D'IACHKOV and V. N. TARASOV (eds.), *Uchebno-vospitatel'naia rabota v spetsial'nykh shkolakh* (Educational Work in Schools for Exceptional Children), Moscow, 1957.
- _____, V. M. DMITRIEV, (ed.), *Organizatsiia i planirovanie vseobshchego srednego obrazovaniia* (Organization and Planning of Universal Secondary Education), Moscow, 1957.
- _____, Gosudartvennaia biblioteka po narodnomu obrazovaniiu im. K. D. Ushinskogo (State Library for Public Education of K. D. Ushinskii), *Bibliografiia izdaniia Akademii Pedagogicheskikh Nauk RSFSR, 1944–1957* (Bibliography of the Publications of the Academy of Pedagogical Sciences of the RSFSR, 1944–1957), Moscow, 1958. The best bibliographical guide, in some instances annotated, to the publications of textbooks, teaching manuals, methodological instructions, etc. and pedagogical writings on Soviet primary and secondary education.
- _____, Gosudarstvennaia biblioteka po narodnomu obrazovaniiu im. K. D. Ushinskogo, *Literatura po pedagogicheskim naukam* (Literature on Pedagogical Science), Moscow, 1954, 1955, 1956, 1957, 1958 and 1959 (quarterly). The best available reference guide to Soviet periodical literature on education and pedagogy compiled by Soviet authorities.
- _____, I. A. KAIROV (ed.), *Pedagogicheskii slovar'* (Pedagogical Dictionary), 2 vols., Moscow, 1960.
- * _____, I. A. KAIROV et al. (eds.), *Narodnoe obrazovanie v SSSR* (Public Education in the U.S.S.R.), Moscow, 1957. Coded in the text as *APS–NarObr–1957*.
- _____, Institut Teorii i Istarii Pedagogiki (Institute of the Theory and History of Pedagogy), *Pedagogika i narodnoe obrazovanie v zarubezhnykh stranakh: Sbornik referatov* (Pedagogy and Public Education in Foreign Countries: Collection of Reference Articles), Moscow, 1959.
- _____, Institut Teorii i Istarii Pedagogiki, *Razvitie samodeiatel'nosti uchashchikhsia v pionerskoi organizatsii* (Developing Independent Activity in Students of the Pioneer Organization), Moscow, 1958.
- ALEKSANDROV, N. G., *Zakonodatel'stvo o trude: Kommentarii* (Legislation on Labor: Interpretive Review), Moscow, 1947.
- _____, et al., *Zakonodatel'stvo o trude: Kommentarii k zakonodatel'stvu o trude SSSR i kodeksu zakonov o trude RSFSR* (Legislation on Labor: Interpretive Review of the Legal Code on Labor in the U.S.S.R. and Code of Legislative Decrees on Labor in the Russian SFSR), 2d ed., Moscow, 1954.
- ALPATOV, N. I., *Vneklasnaia vospitatel'naia rabota v gorodskoi srednei shkole: Posobie dlia uchitelei* (Extracurricular Educational Activities in the Urban Secondary School: Teacher's Aid), Moscow, 1949.
- ANAN'EV, B. G., *Uspekhi sovetskoi psikhologii* (Advances in Soviet Psychology), Leningrad, 1948.
- ANDREEV, V. S., "Razvitie sotsialisticheskikh proizvodstvennykh otноshenii v kolkhozakh" (Development of Socialist Production on Collective Farms) in *Uchenye zapiski: Voprosy politicheskoi ekonomii* (Learned Papers: The Problems of Political Economy), Leningrad, 1957.
- ANODIN, G. S., *Opreделение potrebnosti v spetsialistakh v promyshlennosti: iz opyta ugol'noi promyshlennosti* (Determination of Demand for Specialists in Industry: On the Basis of the Experience in the Coal Industry), Moscow, 1959.
- ANTROPOVA, M. V., *Organizatsiia rezhima dnia shkol'nika* (Organization of the School Day of a School Child), Moscow, 1955.
- * *APS–NarObr–1957* (abbreviation). For full title, see Akademiia Pedagogicheskikh Nauk RSFSR, I. A. Kairov et al. (eds.), *Narodnoe* . . .
- ARAKELIAN, A., *Industrial Management in the U.S.S.R.* (E. L. Raymond, tr.), Washington: Public Affairs Press, 1950.
- ARKHANGEL'SKAIA, N. V., and NAKHIMOVA, M. S., *Plany urokov po arifmetike vo vtorom klasse* (Planning of Class Instruction in Arithmetic in the Second Grade), Moscow, 1958.
- ASTRAKHAN, E., et al., *Rol' sovetskogo trudovogo prava v planovom obespechenii narodnogo khoziaistva kadrami* (Role of the Soviet Labor Law in Planned Provision of the National Economy with Cadres), Moscow, 1955.
- Automobil'naia promyshlennost'* (Automobile Industry) (monthly).
- Bakinskii rabochii* (Azerbaidzhan) (Baku Worker [Azerbaidzhan]) (newspaper).
- BAKULEV, G. D., *Razvitie ugol'noi promyshlennosti Donetskogo Basseina* (Development of the Coal Industry in the Donets Basin), Moscow, 1955.
- * BARTOSEK, M., *Vysoké školství v SSSR* (Higher Education in the U.S.S.R.), Prague, 1947. Coded in the text as Bartosek, *Vysoké*.
- * BARTOSEK, *Vysoké* (abbreviation). For full title, see Bartosek, M., *Vysoké školství* . . .
- BAUSIN, A. F. (ed.), *Sorok let torfianoi promyshlennosti SSSR* (40 Years of the Peat Industry in the U.S.S.R.), Moscow, 1957.
- BEDNIAKOV, A. S., and MATICHENKO, A. S., *Russkii iazyk (Chast' vtoraiia)* (Russian Language [Second Part]), Moscow, 1954.
- * BEILIN, A. E., *Kadry spetsialistov SSSR* (Cadres of Specialists of the U.S.S.R.), Moscow, 1935. Coded in the text as Beilin, *Kadry*.
- * _____, *Kadry* (abbreviation). For full title, see Beilin, A. E., *Kadry spetsialistov* . . .
- BELIAVSKII, M. T., *200 letie Moskovskogo Universiteta* (200 Years of Moscow University), Moscow, 1955.
- BELOBORODOVA, V. K., *Prazdniki v shkole* (Holiday Activities in School), Moscow, 1957.
- BELOVA, E. L. and TODD, L. R., *English: Uchebnik angliiskogo iazyka dlia 8-go klassa srednei shkoly* (English: Textbook of the English Language for the 8th Grade of the Secondary School), Moscow, 1956.
- Biograficheskii slovar' deiatelei estestvoznaniia i tekhniki* (Biographical Dictionary of Prominent Persons in Natural Sciences and Technology), Vols. 1 and 2, Moscow, 1959.
- Biologiya v shkole* (Biology in School) (bimonthly).
- Biuletin' Ministerstva Vysshego Obrazovaniia SSSR* (Bulletin of the Ministry of Higher Education of the U.S.S.R.), 1946 through 1959; *Biuletin' Vsesoiuznogo Komiteta po Delam Vyshnei Shkoly* (Bulletin of the All-Union Committee on Higher Education), July 1936–March 1940; *Biuletin' Komiteta po Vysshemu Tekhnicheskomu Obrazovaniiu* (Bulletin

- of the Commission for Higher Technical Education), 1933-36. Internal publication of the Ministry. Only sporadic issues were available.
- Biuletēn' tekhniko-ekonomicheskoi informatsii* (Bulletin of Technical-Economic Information) (monthly).
- BLINCHESKII, F. L. and ZELENKO, G. I., *Professional'no-tekhnicheskoe obrazovanie rabochikh v SSSR* (Vocational-technical Education of Workers in the U.S.S.R.), Moscow, 1957.
- BOGDANOV, I. M., *Statistika kul'tury* (Statistics of Culture), Moscow, 1950.
- , *Statistika shkol'nogo obrazovaniia* (Statistics on School Education), Moscow, 1954.
- , *Voprosy organizatsii vseobshchego obucheniia* (Problems of Organization of Universal Education), Moscow, 1953.
- BOKAREV, N. I., *Vospitanie distsipliny u detei v sem'e* (The Problem of Discipline among Children in the Family), Znanie series, Moscow, 1955.
- BOLDYREV, N. I., *Klassnyi rukovoditel'* (Classroom Supervisor), Moscow, 1954.
- , *O moral'nom oblike sovetskoi molodezhi* (Concerning the Moral Outlook of Soviet Youth), Moscow, 1954.
- , *O kommunisticheskoi vospitanii detei* (Concerning the Communist Upbringing of Children), Znanie series, Moscow, 1955.
- , *Vospitanie kommunisticheskoi morali u shkol'nikov* (Training in Communist Morality of School Pupils), Moscow, 1956.
- **Bol'shaia Sovetskaia Entsiklopediia* (Large Soviet Encyclopedia), 1st ed., Moscow, 1935 through 1948. Coded in the text as *BSE-1st* with appropriate volume.
- * —, 2d ed., Moscow, 1950 through 1959. Coded in the text as *BSE-2d*, with appropriate volume.
- * —, *Ezhegodnik 1957* (Large Soviet Encyclopedia: Yearbook 1957), Moscow, 1958. Coded in the text as *BSE-YB-1957*.
- * —, *Ezhegodnik 1958* (Large Soviet Encyclopedia: Yearbook 1958), Moscow, 1959. Coded in the text as *BSE-YB-1958*.
- * —, *SSSR* (Large Soviet Encyclopedia: U.S.S.R. volume), 1st ed., Moscow, 1948. Coded in the text as *BSE-SSSR-1948*.
- * —, *SSSR* (Large Soviet Encyclopedia: U.S.S.R. volume), 2d ed., Moscow, 1957. Coded in the text as *BSE-SSSR-1957*.
- Bol'shevik* (biweekly). Since 1953, *Kommunist*.
- BORISOV, A. V., *Uchebnye zavedeniia Ministerstva Morskogo Flota SSSR* (Educational Establishments of the Ministry of Sea Transport of the U.S.S.R.), Moscow, 1957.
- BOVA, M. T., *Osnovy radiotekhniki* (Principles of Radio Technique), Kiev, 1958.
- BRADIS, V. M., *Metodika prepodavaniia matematiki v srednei shcole* (Methods of Teaching Mathematics in the Secondary School), 3d ed., Moscow, 1954.
- **BSE-1st* (abbreviation). For full title, see *Bol'shaia Sovetskaia* . . .
- **BSE-2d* (abbreviation). For full title, see *Bol'shaia Sovetskaia* . . .
- **BSE-SSSR-1948* (abbreviation). For full title, see *Bol'shaia Sovetskaia* . . . 1948.
- **BSE-SSSR-1957* (abbreviation). For full title see *Bol'shaia Sovetskaia* . . . 1957.
- **BSE-YB-1957* (abbreviation). For full title, see *Bol'shaia* . . . *Ezhegodnik 1957*.
- **BSE-YB-1958* (abbreviation). For full title, see *Bol'shaia* . . . *Ezhegodnik 1958*.
- BUBNOV, A., *Bor'ba za politekhnicheskuiu shkol'u—bor'ba za sotsializm* (Struggle for the Polytechnical School—Struggle for Socialism), Moscow, 1931.
- BUKHMAN, K. N., *Statistika podgotovki spetsialistov* (Statistics on the Training of Specialists), Moscow, 1960.
- BUTIAGIN, A. S. and SALTANOV, Iu. A., *Universitetskoe obrazovanie v SSSR* (University Education in the U.S.S.R.), Moscow, 1957.
- BYSHLIA, A. K., *Vospitanie kommunisticheskoi morali u detei* (Development of Communist Morality among Children), Moscow, 1948.
- CHUDNOVSKII, N., "Narodnoe obrazovanie v SSSR" (Public Education in the U.S.S.R.), *Planovoe khoziaistvo*, No. 7 (July 1939), 87-102.
- DANILOV, M. A., et al., *Didaktika* (Didactics), Moscow, 1957.
- DEINEKO, M. M., *Forty Years of Public Education in the U.S.S.R.: Facts and Figures* (D. Myshne, trans.), Moscow, 1957. (English)
- **DEINEKO, Spravochnik* (abbreviation). For full title, see *MP RSFSR, M. M. Deineko, Spravochnik* . . . , 1955.
- , *Sorok let narodnogo obrazovaniia v SSSR* (40 Years of Public Education in the U.S.S.R.), Moscow, 1957.
- DEMENEV, A. I. and DOBROVOL'SKII, N. S., *Vysshee obrazovanie na Urale* (Higher Education in the Urals), Sverdlovsk, 1958.
- **Direktivy KPSS i sovetskogo pravitel'stva po khoziaistvennym voprosam: Sbornik dokumentov* (Directives of the Communist Party of the Soviet Union and Soviet Government on the National Economy: Compilation of Documents), Moscow, 1957, 4 vols. Coded in the text as *Direktivy-SBX-1957*, with appropriate volume.
- **Direktivy-SBX-1957* (abbreviation). For full title, see *Direktivy KPSS i* . . .
- DMITRIEV, V. M. et al., *Organizatsiia i planirovanie vseobshchego desiatiletнего obrazovaniia* (Organization and Planning of the Universal Ten-Year Education), Moscow, 1955.
- DONSKOI, V., "Ideino politicheskaiia rabota partorganizatsii vysshykh uchebnykh zavedenii" (Ideological and Political Work of Party Organizations in Higher Educational Establishments), *Bol'shevik*, No. 18 (Sept. 1951), 59-66.
- **Dos-1957* (abbreviation). For full title, see *TsSU SM SSSR, Dostizheniia* . . .
- Doshkol'noe vospitanie* (Preschool Education) (monthly).
- DUBROVINA, L. V., "Educational Progress in 1955-56: Union of Soviet Socialist Republics," *International Yearbook of Education*, 1956, 376-86.
- , "Pyramid to Outer Space: The Educational Foundations," *The Times Educational Supplement*, 2220: 1551, Dec. 6, 1957.
- Dvadtsatyi S'ezd Kommunisticheskoi Partii Sovetskogo Soiuza: Stenograficheskii otchet* (The 20th Congress of the Communist Party of the Soviet Union: Stenographic Report), Vols. I and II, Moscow, 1956.
- DVUSHERSTNOV, G. I. (ed.), *Moskovskii Gosudarstvennyi Universitet k XX letiiu velikoi sotsialisticheskoi revoliutsii*, (Moscow University at the 20th Anniversary of the Great Socialist Revolution), Moscow, 1937.
- EFIMOV, A. V., *Novaia istoria: Uchebnik dlia 8-go klassa* (Modern History: Textbook for the 8th Grade), Moscow, 1940.
- EFIMOV, A. N., *Perestroika upravleniia promyshlennost'iu i stroitel'stvo v SSSR* (Rebuilding of the Administration of Industry and Construction in the U.S.S.R.), Moscow, 1957.
- Elektrichestvo* (Electricity) (monthly).
- EL'IASHEVICH, A. B. et al., *Ekonomika sotsialisticheskogo mashinostroeniia* (Economics of Socialist Machine Building), Moscow, 1957, p. 154.
- ELIGULASHVILI, G. (comp.), *VLKSM v tsifrakh i faktakh* (The Komsomol in Figures and Facts), Moscow, 1949.
- ELIUTIN, V. P., *Higher Education in the U.S.S.R.*, New York: International Arts and Sciences Press, 1958.
- * —, *Vysshaia shkola strany sotsializma* (Higher Education in the Country of Socialism), Moscow, 1959. Coded in the text as *Eliutin-VSSS-1959*.
- **Eliutin-VSSS-1959* (abbreviation). For full title, see *Eliutin, V. P., Vysshaia* . . .
- ESIPOV, B., "The Problems of Curricula in Secondary Schools in the U.S.S.R.," in G. Z. F. Bereday and J. A. Lauwerys (eds.), *The Secondary School Curriculum: The Year Book of Education*, 1958, New York: World Book Company, 1958.
- EVENKO, I. A., *Voprosy planirovaniia v SSSR na sovremennom etape* (Problems of Planning in the U.S.S.R. in the Present Stage), Moscow, 1959.
- Ezhov, A., *Organizatsiia gosudarstvennoi statistiki v SSSR*

- (Organization of Statistical Reporting in the USSR), Moscow, 1957.
- _____, *Soviet Statistics* (Eng.), Moscow, 1957.
- FED'KIN, G. I., *Pravovye voprosy organizatsii nauchnoi raboty v SSSR* (Legal Problems of the Organization of Scientific Research Activity in the U.S.S.R.), Moscow, 1958.
- _____, "Resheniia XXI S'ezda KPSS—osnova dal'neishego sovershenstvovaniia sovetskogo prava" (The Decisions of the 21st Congress of the CPSU—A Foundation for Further Improvement in Soviet Jurisprudence), *Sovetskoe gosudarstvo i pravo* (Soviet State and Jurisprudence), May 1959, No. 5, pp. 12–24.
- Finansirovanie prosveshcheniia; *sbornik zakonodatel'nykh materialov* (Financing Education; a Collection of Legal Documents), compiled by P. I. Zubok, N. A. Pomanskii, and F. A. Gal'perina, Moscow, 1946.
- Fizika v shkole (Physics in School) (bimonthly).
- Fizkultura v shkole (Physical Culture in Schools) (monthly).
- * GALKIN, Nau Kadry (abbreviation). For full title, see Galkin, K. T., *Vyshee* . . .
- * _____, K. T., *Vyshee obrazovanie i podgotovka nauchnykh kadrov v SSSR* (Higher Education and Training of Research Cadres in the U.S.S.R.), Moscow, 1958. Coded in the text as Galkin, Nau Kadry.
- GANSHTAK, V. I., *Sebestoimost' produktsii v mashinostroenii* (Cost Accounting of Output in Machine Building), Moscow, 1956.
- Geografiia v shkole (Geography in Schools) (bimonthly).
- GINSBURG, L. IA., *Trudovoi stazh rabochikh i sluzhashchikh* (Employment Experience of Workers and Employees), Moscow, 1958.
- Glavnoe Upravlenie Trudovykh Rezervov pri Sovete Ministrov SSSR (Chief Administration of the Labor Reserve of the Council of Ministers of the U.S.S.R.), M. M. Deineko (compiler), *Gde poluchit' spetsial'nost': Spravochnik dlia okonchivshikh srednie shkoly postupaiushchikh v tekhnicheskie uchilishcha, professional'no-tekhnicheskie i drugie shkoly* (Where to Obtain a Specialty: Handbook for Secondary School Graduates Entering Technical, Vocational-Technical and Other Schools), Moscow, 1955.
- GMURMAN, V. E. (ed.), *Iz opyta organizatsii i vospitaniia uchenicheskogo kollektiva: pedagogicheskie chteniia* (An Experience in Organizing and Educating the School Collective: Pedagogical Readings), Moscow, 1955.
- GNEDENKO, B. V., "Mathematical Education in the U.S.S.R.," *The American Mathematical Monthly*, Vol. 64, No. 6 (June-July 1957), 389–408.
- GOFMAN, I. F., et al., *Organizatsiia i planirovanie energokhoziaistva promyshlennykh predpriatii* (Organization and Planning of Power Enterprises), Moscow, 1954.
- GOLOSHCHALOV, V. A. (comp.), *Raschety s rabochimi i sluzhashchimi* (Accounts [Wage Payments] with Workers and Employees), Moscow, 1954.
- GONCHAROV, N. K., *Puti dostizheniia vysokoi uspevaemosti v shkole* (Measures toward High Achievement in School), Moscow, 1954.
- _____, *Sovetskaia shkola v shestoii piatiletke* (Soviet Schools in the Sixth Five-Year Plan), *Znanie Series II*, No. 37, Moscow, 1956.
- Gornyi zhurnal (Mining Journal) (monthly).
- Gosplan SSSR (State Planning Commission of the U.S.S.R.), *Formy i pokazateli k sostavleniiu proekta perspektivnogo plana razvitiia narodnogo khoziaistva SSSR na 1959–1965 gody* (Reporting Forms and Indicators for the Preparation of the Projected Plan for the Development of the National Economy of the U.S.S.R. for 1959–1965), Moscow, 1957, esp. pp. 12–18.
- * _____, *Gosudarstvennyi plan razvitiia narodnogo khoziaistva SSSR na 1941 god* (State Plan for the Development of the Economy in the U.S.S.R. in 1941), American Council of Learned Societies Reprints: Russian Series No. 30, 1941, Coded in the text as Plan 1941.
- * _____, *Itogi vypolneniia pervogo piatiletnego plana razvitiia narodnogo khoziaistva SSSR* (Results of the Fulfillment of the First 5-Year Plan of the National Economy of the U.S.S.R.), Moscow, 1935. Coded in the text as *Itogi pervogo FYP*.
- _____, *Kontrol'nye tsifry narodnogo khoziaistva SSSR na 1928–29 god* (Statistics of the National Economy of the U.S.S.R. for 1928–29), Moscow, 1929.
- * _____, *Narodno-khoziaistvennyi plan na 1935 god* (National Economy Plan for 1935), Moscow, 1935. Coded in the text as Plan 1935.
- * _____, *Narodno-khoziaistvennyi plan na 1936 god* (National Economy Plan for 1936), Vols. 1 and 2, Moscow, 1936. Coded in the text as Plan 1936.
- * _____, *Narodno-khoziaistvennyi plan na 1937 god* (National Economy Plan for 1937), Moscow, 1937. Coded in the text as Plan 1937.
- * _____, *Narodnoe khoziaistvo SSSR (sbornik)* (National Economy of the U.S.S.R. [collected articles]), Moscow, No. 2, 1949; No. 3, 1950; No. 4, 1951. Coded in the text as *Nar Khoz SBX*, with appropriate volume.
- _____, *Results of the Fulfillment of the First 5-Year Plan of the National Economy of the U.S.S.R.*, Eng. ed., Moscow, 1935.
- * _____, *Tretii piatiletnii plan razvitiia narodnogo khoziaistva SSSR (1938–1942)* (Third 5-Year Plan of the Development of the National Economy of the U.S.S.R.), Moscow, 1939. Coded in the text as *Tretii FYP*.
- * _____, *Vtoroi piatiletnii plan razvitiia narodnogo khoziaistva SSSR (1933–37)* (Second 5-Year Plan of the Development of the National Economy of the U.S.S.R.), Vol. 1, Moscow, 1934. Coded in the text as *Vtoroi FYP*.
- _____, Nauchno-Issledovatel'skii Ekonomicheskii Institut (Research Institute of Economics), B. I. Braginskii (ed.), *Planirovanie potrebnosti narodnogo khoziaistva v spetsialistakh* (Planning of Requirements of the National Economy in Specialized Personnel), Moscow, 1959.
- * _____, Tsentral'naia Komissia po Kadram (Central Commission on Cadres), *Plan obespechniia narodnogo khoziaistva SSSR kadrami spetsialistov (1929–30–1932–33)* (Plan for Supplying the National Economy of the U.S.S.R. with Cadres of Specialists), Moscow, 1930. Coded in the text as *Plan Kadrov–1930*.
- Gosudarstvennaia Biblioteka SSSR imeni Lenina (Lenin State Library), *Katalog kandidatskikh i doktorskikh dissertatsii* (Catalogue of Candidate and Doctor Dissertations), Moscow, 1960.
- GRANOVSKII, E. L., et al., *Ekonomika sotsialisticheskoi promyshlennosti* (Economics of Socialist Industry), Moscow, 1940.
- GRIGORIEV, A. E., *Ekonomika truda* (Economics of Labor), Moscow, 1959.
- GRIVKOV, I. I., "Professional Organizations," *The Year Book of Education*, pp. 413–17, London: Evans Bros., Ltd., 1953.
- GRUZDEV, P. N. (ed.), *Voprosy vospitaniia myshleniia v protsesse obucheniia* (Problems of Thought Development in the Process of Education), Moscow-Leningrad, 1949.
- GUBAREVA, O. E., "Sovnarkhozy i voprosy podgotovki i ispol'zovaniia spetsialistov" (Regional Economic Councils and the Problems of Preparation and Utilization of Cadres of Specialists), in *Akademiia Obshchestvennykh Nauk pri TsK KPSS*, A. G. Kulikov (ed.), *Iz opyta raboty sov-narkhozov i razvitiia khoziaistva raionov*, Moscow, 1959.
- Gudok (Whistle) (newspaper).
- Higher Educational Establishments in the U.S.S.R., VOKS Information Bureau, Moscow, 1939.
- Higher Technical Education in the U.S.S.R., U.S.S.R. Section at the Universal and International Exhibition of Brussels, Brussels, 1958.
- IAKOVLEVA, E. N. (compiler), *Statisticheskii sbornik po voprosam truda i zarabotnoi platy v Evropeiskikh sotsialisticheskikh stranakh* (Statistical Handbook for Employment and Wages in European Socialist Countries), Moscow, 1959.
- Inostrannye iazyki v shkole (Foreign Languages in Schools) (bimonthly).
- Institut Gornogo dela Akademii Nauk SSSR (Institute of Mining of the Academy of Sciences of the U.S.S.R.), N. V.

- Mel'nikov (ed.), *Sovetskaia gornaia nauka, 1917-1957* (Soviet Mining Science, 1917-1957), Moscow, 1957.
- Inzhenernyi trud* (Engineering Work) (monthly).
- IOFFE IA. A. (compiler), *Strany sotsializma i kapitalizma v tsifrakh* (Countries of Socialism and Capitalism in Figures), Moscow, 1957.
- Istoriia Moskovskogo Universiteta, 1755-1955* (History of Moscow University, 1755-1955), 2 vols. Moscow, 1955.
- **Itogi pervogo FYP* (abbreviation). For full title, see Gosplan SSSR, *Itogi vypolneniia* . . .
- IVANOVICH, K. A., *Sel'skokhoziaistvennoe obrazovanie v SSSR* (Agricultural Education in the U.S.S.R.), Moscow, 1958.
- Iz istorii Moskovskogo Universiteta, 1917-1941: Sbornik statei* (History of Moscow University, 1917-1941: Collection of Essays), Moscow, 1955.
- Izvestiia* (News) (newspaper).
- Izvestiia vuz'ov* (Journal of Higher Educational Establishments)
- KAFANOV, S. V., *Vydaishchaiaia rol' laureatov Stalinskoi premii v razvitiu nauki i tekhniki v SSSR* (The Outstanding Role of Laureats of the Stalin Prizes and the Development of Science and Technology in the U.S.S.R.), Moscow, 1949.
- _____, *Vysshee obrazovanie v SSSR* (Higher Education in the U.S.S.R.), Moscow, 1950.
- _____, *Zadachi vysshei shkoly* (The Task of Higher Education), Moscow, 1944.
- KAGANOVICH, I. Z., *Ocherk razvitiia statistiki shkol'nogo obrazovaniia v SSSR* (Survey of the Development of the Statistics of School Education in the U.S.S.R.), Moscow, 1957.
- KAIROV, I. A., *Pedagogika* (Pedagogy), 2d ed., Moscow, 1948.
- KALASHNIKOV, A. G., *Tritsats' let sovetskogo prosveshcheniia* (Thirty Years of Soviet Education), Moscow, 1947.
- KALININ, M. I., *On Communist Education*, Moscow, 1949.
- KAMENOGORSKII, I. S., *Vospitanie chestnosti i pravdivosti u detei* (Upbringing of Honesty and Truthfulness among Children), Znanie series, Moscow, 1955.
- KARPENKO, A. P., *Sistema podgotovki i povysheniia kvalifikatsii kadrov v narodnom khoziaistve SSSR* (System of Training and Improvement of the Qualification of Cadres in the National Economy of the U.S.S.R.), Moscow, 1954.
- KARPOV, G. G., *O sovetskoi kul'ture i kul'turnoi revoliutsii v SSSR* (Concerning Culture and the Cultural Revolution in the U.S.S.R.), Moscow, 1954.
- Kazakhstanskaia pravda* (Kazakhstan Truth) (newspaper).
- KAZ'MIN, N. D. (ed.), *Vsesoiuznoe soveshchanie po shkolam-internatam (19-23 apreliia 1957 goda)* (All-Union Conference on Boarding Schools [19-23 April, 1957]), Moscow, 1958.
- Khimiia v shkole* (Chemistry in Schools) (bimonthly).
- KIM, M. P., "Sovetskaia kul'tura" (Soviet Culture), in *Sovetskii Soiuz* (Soviet Union), Moscow, 1957, 187-222.
- KIRSANOV, A. N. and KUDINOV, I. A., *Inspektirovanie ekzamenov v shkole* (The Inspection of Examinations in School), Moscow, 1950.
- KLIMOV, S., *Vseobshchee obuchenie i plitekhizatsiia sel'skoi shkoly* (Universal Education and Polytechnization of Agricultural Schools), Moscow, 1931.
- KOLMOGOROV, A. N., *O professii matematika* (On the Profession of a Mathematician), 2d. ed., Moscow, 1954.
- KOMARI, M., et al., "Mesto i rol' nauki v razvitiu obshchestva" (The Place of Science in the Development of Society), *Bol'shevik*, No. 4 (Feb. 1952), 9-23.
- KOMAROV, V. E., *Ekonomicheskie osnovy podgotovki spetsialistov dlia narodnogo khoziaistva* (Economic Foundation for the Training of Specialists for the National Economy), Moscow, 1959.
- _____, "Nekotorye voprosy planirovaniia podgotovki spetsialistov dlia narodnogo khoziaistva" (Some Problems of Planning of the Training of Specialists for the National Economy), *Planovoe khoziaistvo*, No. 9, Sept. 1957, 55-65.
- _____, "Podgotovka spetsialistov dlia narodnogo khoziaistva" (Training of Specialists for the National Economy), in Ia. A. Kronrod' (ed.), *Voprosy sotsialisticheskogo vosproizvodstva*, Moscow, 1958.
- Kommunist* (Communist) (bi-weekly). Prior to 1953, *Bol'shevik*.
- Kommunist (Armenia)* (Communist [Armenia]) (newspaper).
- Kommunist Tadzhikistana* (Communist Tadzhikistan) (newspaper).
- Komsomol'skaia pravda* (Young Communist League Truth) (newspaper).
- Komsomol'skaia rabota v VUZ'e* (Komsomol Work in the Higher Educational Establishment) (10 essays), Moscow, 1953.
- KONDAKOV, V. V., "Promyshlennost' sovmarkhoza i mestnykh sovetov v ekonomicheskoi administrativnom raione" (Industry of the Regional Economic Council and the Local Soviet in Economic Administrative Region), in *Akademiia Obshchestvennykh Nauk pri TsK KPSS, Iz opyta* . . . Moscow, 1959.
- KONDAKOVA, M. I. (ed.), *Organizatsiia raboty v shkolakh i gruppakh prodlnenogo dnia* (Organization of Work in Schools and Groups with an Extended School Day), Moscow, 1960.
- KONSTANTINOV, N. A. and STRUMINSKII, V. IA., *Ocherki po istorii nachal'nogo obrazovaniia v Rossii* (Essays in History of Elementary Education in Russia), Moscow, 1953.
- KOROLEV, F. F., *Education in the U.S.S.R.*, Soviet News Booklet No. 24, London, n.d.
- _____, *Uspekhi narodnogo obrazovaniia v SSSR za 40 let* (Achievements of Public Education in the U.S.S.R. for 40 Years), Znanie series II, No. 30, Moscow, 1957.
- KOROLIVSKII, S. M. (ed.), *Khar'kovskii Gosudarstvennyi Universitet im. A.M. Gor'kogo za 150 let* (Kharkov State University of A.M. Gorkii during 150 Years), Khark'ov, 1955.
- KOROPOV, V., *Veterinarnoe obrazovanie v SSSR* (Veterinary Education in the U.S.S.R.), Moscow, 1948.
- KOSHELEV, F., *Pod'em material'nogo i kul'turnogo urovnia zhizni sovetskogo naroda* (Raising of the Material and Cultural Level of the Soviet People), Znanie series II, No. 22, Moscow, 1954.
- KOSTAKOV, V. and LITVIKOV, P., "Printsipy opredeleniia potrebnosti v spetsialistakh" (Principles of the Determination of the Demand for Specialists), *Sotsialisticheskii trud*, No. 8, 1959, 19-27.
- KOSTIN, L., *Wages in the U.S.S.R.* (English translation of *Oplata truda rabochikh i sluzhashchikh v promyshlennosti SSSR*), Moscow, 1960.
- KOTOV, F. I., *Voprosy truda v semiletнем plane* (Problems of Labor in the 7-Year Plan), Moscow, 1960.
- KOVRIGINA, M. D. (ed.), *Sorok let sovetskogo zdravookhraneniia* (Forty Years of Soviet Public Health), Moscow, 1957.
- KOZLOV, V. V. (comp.) *Moskovskii Institut Narodnogo Khoziaistva im. G.V. Plekhanova: 50 Let* (Moscow Institute of National Economy of G.V. Plekhanov: 50 Years), Moscow, 1957.
- KOZLOVA, O. B., *Pod'em kul'turno-tekhnicheskogo urovnia rabochego klassa SSSR* (Improvement in Cultural-Technical Level of the Working Class of the U.S.S.R.), Moscow, 1959.
- Kratkaia Sovetskaia Entsiklopediia* (Short Soviet Encyclopedia), 1st ed., Moscow, 1948, 2d ed., Moscow, 1958.
- Krokodil* (Crocodile) (weekly).
- KRONROD, IA. A. (ed.), *Voprosy sotsialisticheskogo vosproizvodstva; sbornik statei* (Problems of Socialist Reproduction; Collection of Articles), Moscow, 1957.
- KRUPSKAIA, N. K., *Essays on Education*, Moscow, 1957.
- *KS-1956 (abbreviation). For full title, see TsSU SM SSSR, *Kul'turnoe* . . .
- *KS-RSFSR-1958 (abbreviation). For full title see TsSU SM RSFSR, *Kul'turnoe* . . . 1958.
- KUBEEV, B. V. (comp.), *Nauchnaia kinodokumentatsiia vypolneniia v vuzakh v 1948-57 godakh* (Scientific Documentary Movies Produced in Higher Educational Establishments in 1948-57), Moscow, 1958.
- Kuda poiti uchitsa: Spravochnik dlia postupaiushchikh v vysshie uchebnye i srednie spetsial'nye uchebnye zavedeniia* (Tehnikumy, uchilischa, shkoly) Moskvy i Moskovskoi Oblasti v . . . godu (Where to Study: Handbook for

- Entrants to Higher Educational Establishments and Secondary Specialized Schools [Technicums and Other Semi-professional Schools] in Moscow and the Moscow Region in . . . Year, annual volumes from 1946 through 1959, Moscow, published in the respective year.
- **Kul't Stroi-1934* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Kul'turnoe stroitel'stvo* . . .
- **Kul't Stroi-1935* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Kul'turnoe stroitel'stvo* . . .
- **Kul't Stroi-1940* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Kul'turnoe stroitel'stvo* . . .
- KUPREVICH, V. F., *Akademiia Nauk Belorusskoi SSR* (Academy of Sciences of the Belorussian SSR), Minsk, 1957.
- KUZNETSOV, V. I., *Sodruzhestvo rabotnikov nauki i proizvodstva* (Cooperation between Workers in Science and Production), Znanie series IV, No. 8, Moscow, 1953.
- LENIN, V. I., *Stat'i i otryvki po voprosam narodnogo prosveshcheniia i shkoly* (Articles and Passages on Questions of Public Education and Schools), Moscow, 1938.
- Leningradskii Gosudarstvennyi Universitet (Leningrad State University), *Dissertatsii: 1934-54* (Theses: 1934-54), Leningrad, 1955.
- , *Kak gotovit'sia k priemnym ekzamenam v VUZ* [subject] (How to Prepare for Entrance Examinations in Higher Educational Establishments [in a given subject]), Leningrad, 1960.
- LEVIN, I. M., *Planirovanie truda i zarabotnoi platy na promyshlennyykh predpriyatiakh* (Planning of Labor and Wages of the Industrial Enterprises of the U.S.S.R.), Moscow, 1958.
- LEVITOV, N. A., *Detskaia i pedagogicheskaya psikhologiya* (Child and Pedagogical Psychology), Moscow, 1958.
- LIASNIKOV, I. A., "Nekotorye soobrazheniia o potrebnosti SSSR v spetsialistakh" (Some Thoughts on the Demand for Specialists of the U.S.S.R.), *VVSh*, No. 4, April 1948, 12-17.
- , *Podgotovka spetsialistov promyshlennosti SSSR* (Training of Specialists for Industry in the U.S.S.R.), Moscow, 1954.
- Literatura v shkole* (Literature in Schools) (bimonthly).
- Literaturnaia gazeta* (Literary Gazette) (newspaper).
- LORDKIPANIDZE, D. O., *Printsiipy, organizatsiia i metody obucheniia* (Principles, Organization and Methods of Instruction), Tiflis, 1955.
- LUZHIN, A. V., *Rabota raionnogo soveta v oblasti narodnogo obrazovaniia i kul'tury* (Work of the Regional Soviets in the Area of Public Education and Culture), Moscow, 1957.
- MAKARENKO, A. S., *A Book for Parents*, Moscow, 1954.
- , *Learning to Live*, Moscow, 1951 (3 vols.).
- , *O kommunisticheskoi vospitanii: izbrannye pedagogicheskie proizvedeniia* (Writings on Communist Education: Selected Pedagogical Works), Moscow, 1952.
- , *The Road to Life*, Moscow, 1953.
- MAKHOV, A., "Voprosy partiinoi raboty v vysshei shkole," *Partiinaia zhizn'*, Jan. 1958, 15-21.
- MALIN, V. A., et al. (eds.), *Spravochnik partiinogo rabotnika* (Handbook for the Party Functionary), Moscow, 1st ed., 1957, 2d ed., 1959.
- MALYSHEVA, A. N. et al. (eds.), *Povyshenie kvalifikatsii uchitelei* (Improvement of the Qualifications of Teachers), Moscow, 1958. (Special publication of the Tsentral'nyi Institut Povysheniia Kvalifikatsii Rukovodiashchikh Rabotnikov Narodnogo Obrazovaniia—Central Institute for the Improvement of the Qualifications of Leading Personnel in Public Education.)
- MANEVICH, E. L., *Zarabotnaia plata i ee formy v promyshlennosti SSSR* (Wages and Its Forms in the Industry of the U.S.S.R.), Moscow, 1951.
- Matematika v shkole* (Mathematics in Schools) (bimonthly).
- MAVRODIN, V. V., et al., *Leningradskii Universitet* (Leningrad University), Leningrad, 1957.
- Meditsinskii rabotnik* (Medical Worker) (monthly).
- Meditsinskaia sestra* (Medical Nurse) (monthly).
- **Medynskii-1947* (abbreviation). For full title, see Medynskii, E. N., *Narodnoe* . . .
- **Medynskii-1952* (abbreviation). For full title, see Medynskii, E. N., *Narodnoe* . . .
- **Medynskii-1955* (abbreviation). For full title, see Medynskii, E. N., *Prosveshchenie* . . .
- MEDYNSKII, E. N., *Die Bildung des Volkes in der U.S.S.R.*, Vienna, 1946.
- , *Istoriia Russkoi pedagogiki do velikoi oktiabr'skoi sotsialisticheskoi revoliutsii* (History of Russian Education before the Great October Socialist Revolution), Moscow, 1938.
- * —, *Narodnoe obrazovanie v SSSR* (Public Education in the U.S.S.R.), 1st ed., Moscow, 1947. Coded in the text as *Medynskii-1947*.
- * —, *Narodnoe obrazovanie v SSSR* (Public Education in the U.S.S.R.), 2d ed., Moscow, 1952. Coded in the text as *Medynskii-1952*.
- * —, *Prosveshchenie v SSSR* (Education in the U.S.S.R.), Moscow, 1955. Coded in the text as *Medynskii-1955*.
- , *Public Education in the U.S.S.R.*, 3d ed., Moscow, 1952.
- , "Schools and Education in the U.S.S.R.," *American Sociological Review*, Vol. IX, No. 3 (June 1944), 287-295.
- , "The U.S.S.R.," *The Year Book of Education*, London: Evans Bros. Ltd., 1948, 396-434.
- , et al., "Narodnoe obrazovanie" (Public Education) in *Bol'shaia Sovetskhaia Entsiklopediia, SSSR*, (Large Soviet Encyclopedia, U.S.S.R. Volume), Moscow, 1947, pp. 1195-1252.
- MEL'NIKOV, M. A., and SKATKIN, M. N. (eds.), *Politehnicheskoe obuchenie v obsheobrazovatel'noi shkole* (Polytechnical Instruction in General Education School), Moscow, 1953.
- MGU (Moskovskii Gosudarstvennyi Universitet—Moscow State University), *Doktorskie i kandidatskie dissertatsii: 1934-54* (Doctor and Candidate Theses: 1934-54), Vol. I (Mathematics, Physics and Chemistry), Moscow, 1956.
- , *Spravochnik dlia postupaiushchikh v Moskovskii Universitet v 1949* (Handbook for Entrants to Moscow University in 1949), Moscow, 1949.
- , Iu. A. SALTANOV (ed.), *Otchet o deiatel'nosti Moskovskogo Gosudarstvennogo Universiteta imeni M. V. Lomonosova v 1955-56 uchebnom godu* (Report of the Activities of Moscow State University of M. V. Lomonosov in 1955-56), Moscow, 1960.
- , G. D. VOVCHEKO (ed.), *Spravochnik dlia postupaiushchikh v Moskovskii Universitet v 1955 godu* (Handbook for Entrants to Moscow University in 1955), Moscow, 1955.
- , *Moskovskii Universitet: Kratkii ocherk fakul'tetov i spetsial'nostei* (Moscow University: Brief Description of Departments and Specialties), Moscow, 1956.
- , K. I. IVANOV (ed.), *Moskovskii Universitet: Spravochnik dlia postupaiushchikh v MGU v 1959 godu* (Moscow University: Handbook for Entrants to Moscow State University in 1959), Moscow, 1959.
- MIKHAILOV, A. A., "The Organization of Scientific Work in the U.S.S.R.," *American Review of the Soviet Union*, Vol. 8 (1947), 26-35.
- MIKRYUKOV, M., *Students of Moscow University* (English), Moscow, 1958.
- Ministerstvo Finansov SSSR (Ministry of Finance of the U.S.S.R.), P. A. MALETIN (ed.), *Spravochnik raionnogo finansovogo rabotnika* (Handbook of Regional Finance Workers), Moscow, 1952.
- , *Biudzhethoe Upravlenie* (Office of the National Budget), *Rashody na sotsial'no-kul'turnye meropriiatiia po gosudarstvennomu biudzhetu SSSR: Statisticheskii sbornik* (Expenditures for Socio-Cultural Undertakings in the State Budget of the U.S.S.R.: Statistical Handbook), Moscow, 1958.
- Ministerstvo Zdravookhraneniia SSSR (Ministry of Health of the U.S.S.R.), *Zdravookhranenie v SSSR: Statisticheskii spravochnik* (Health Care in the U.S.S.R.: Statistical Handbook), Moscow, 1957.
- Molodoi kommunist* (Young Communist) (monthly).
- MOROZOV, P. D., *Leninskie printsiipy podbora, rasstanovki i*

- vosпитaniia kadrov* (Leninist Principles of Selection, Placement and Training of Cadres), Moscow, 1959.
- Moskovskii Komsomolets* (Moscow Young Communist Leaguers).
- Moscow News* (English newspaper).
- Moscow Radio.
- MOVSHOVICH, M. I., *Technical and Vocational Education in the U.S.S.R.*, Paris: UNESCO, 1959.
- MOVRODIN, V., et al., *Leningradskii Universitet* (Leningrad University), Leningrad, 1957.
- MP RSFSR (Ministerstvo Prosveshcheniia RSFSR—Ministry of Education of the RSFSR), N. I. Boldyrev (comp.), *Direktivny VPK(b) i postanovleniia sovetskogo pravitel'stva o narodnom obrazovanii: sbornik dokumentov za 1917–1947 gody* (Directives of the Communist Party and the Decrees of the Soviet Government Concerning Public Education: Collection of Documents for 1917–47), Vols. I, II, Moscow, 1947.
- _____, N. I. BOLDYREV (ed.), *Sbornik rukovodiashchikh materialov o shkole* (Collection of Regulations on Schools), Moscow, 1952.
- _____, *Bilety dlia ekzamenov na attestat zrelosti za kurs srednei shkoly* (Examination Tickets for the Secondary School Certificate of Maturity), published annually by *Uchpedgiz*.
- _____, M. A. DANEV (comp.), *Narodnoe obrazovanie—osnovnye postanovleniia, priказы i instruktsii* (Public Education—Major Decrees, Ordinances and Regulations), Moscow, 1948.
- * _____, M. M. DEINEKO (comp.), *Spravochnik direktora shkoly: sbornik postanovlenii, prikazov, instruktsii i drugih rukovodiashchikh materialov o shkole* (Handbook for School Directors: Compilation of Decrees, Regulations, Instructions and Other Directives Concerning Schools), Moscow, 1st ed., 1954, 2d ed., 1955. 2d ed. coded in the text as Deineko, *Spravochnik*.
- _____, *Programmy srednei shkoly* (Programs for Secondary Schools), Moscow 1957. Available also for other years, or for separate subjects individually.
- _____, *Akademii Pedagogicheskikh Nauk RSFSR* (Academy of Pedagogical Sciences, RSFSR), *Shkol'nye programmy: nachal'nykh klassov vos'miletnei shkoly na 1959–60 uchebnyi god* (School Programs of Elementary Grades of the 8-year School for the Academic Year 1959–60), Moscow, 1959. Separate issues of programs for (1) Chemistry; (2) Physical Culture; (3) Drawing; (4) Drafting; (5) Singing; (6) Physics and Astronomy; (7) complete set of programs for all subjects in Grades 1–4; (8) Mathematics; (9) Geography; (10) Biology. These are programs for the proposed new 11-year-school curriculum.
- MVO SSSR* (Ministerstvo Vysshego Obrazovaniia SSSR—Ministry of Higher Education of the U.S.S.R.), *Aspirantura vysshikh uchebnykh zavedenii SSSR* (Aspirantura Training of Higher Educational Establishments of the U.S.S.R.), Moscow, 1949.
- _____, *Aspirantura—Spravochnik dlia postupaiushchikh v aspiranturu i soiskatelei uchenykh stepeni* (Aspirantura—Handbook for Entrants to Aspirantura and Persons Seeking Advanced Degrees), Moscow, 1960.
- * _____, L. I. KARPOV, et al. (eds.) and E. I. VOILENKO et al. (comp.), *Vysshaia shkola: Osnovnye postanovleniia, priказы i instruktsii* (Higher Education: Major Decrees, Ordinances and Regulations), Moscow, 1957. Coded in the text as *VyShkoSPR-1957*.
- * _____, M. MOVSHOVICH (comp.), *Vysshaia shkola: Osnovnye postanovleniia, priказы i instruktsii* (Higher Education: Major Decrees, Ordinances and Regulations), 2d ed., Moscow, 1948. Coded in the text as *VyShkoSPR-1948*.
- _____, M. MOVSHOVICH, (comp.), *Tekhnikumy: Osnovnye postanovleniia, priказы i instruktsii* (Technicums: Major Decrees, Ordinances and Regulations), Moscow, 1947.
- _____, *Pravila priema i programmy priemnykh ekzamenov dlia postupaiushchikh v srednie spetsial'nye uchebnye zavedeniia (tekhnikumy, uchilishcha, shkoly) v . . . godu* (Admission Rules and Programs of Entrance Examinations for Those Entering Institutions of Secondary Specialized Education [Technicums and Other Schools] in . . . Year), Moscow, published in the respective years, 1955 through 1960.
- _____, *Pravila priema i programmy priemnykh ekzamenov dlia postupaiushchikh v vysshie uchebnye zavedeniia SSSR v . . . godu* (Admission Rules and Programs of Entrance Examinations for Those Entering Higher Educational Establishments in the U.S.S.R. in . . . Year), Moscow, published in the respective years 1955 through 1960.
- * _____, *Spravochnik dlia postupaiushchikh v srednie spetsial'nye uchebnye zavedeniia SSSR (tekhnikumy, uchilishcha, shkoly) v . . . godu* (Handbook for Entrants into Secondary Specialized Schools in the U.S.S.R. [Technicums and Other Semiprofessional Schools] in . . . year), annual volumes for years 1953 through 1960, Moscow, published in the respective years. Coded in the text as *Sprav SSU* with appropriate year.
- * _____, *Spravochnik dlia postupaiushchikh v vysshie uchebnye zavedeniia SSSR v . . . godu* (Handbook for Entrants to Higher Educational Establishments in the U.S.S.R. in . . . year), annual volumes for years 1947 through 1960, Moscow, published in the respective years. Coded in the text as *Sprav VUZ* with appropriate year.
- * _____, *Uchebnyi plan No. . . : Spetsial'nost' . . .* (Study Plan [Curriculum] No. . . : Specialty . . .). These are separate individual folios of time schedule, courses of instruction, etc. for particular specialties approved by the Ministry on various dates. Referred to in the text as *Source X*.
- _____, *Uchebnye plany pedagogicheskikh institutov* (Study Plans of Pedagogical Institutes), Moscow, 1957.
- * _____, *Metodicheskoe Upravlenie* (Administration on Methodology), *Uchebnye plany po spetsial'nostiam vysshikh tekhnicheskikh i sel'skokhoziaistvennykh uchebnykh zavedenii* (Programs of Study for Specialties Offered in Engineering and Agricultural Higher Educational Establishments), Moscow, 1956 (original and microfilm). Referred to in the text as *Source Z*.
- _____, *Planovo-Ekonomicheskii Otdel* (Planning-Economics Section), *Aspirantura vysshikh uchebnykh zavedenii SSSR* (Aspirantura of the Higher Educational Establishments of the U.S.S.R.), Moscow, 1949. The listing presented is as of July 1948.
- _____, *Upravlenie Srednikh Spetsial'nykh Uchebnykh Zavedenii* (Division of Secondary Specialized Educational Establishments), jointly with Ministerstvo Radiotekhnicheskoi Promyshlennosti SSSR, *Upravlenie Uchebnymi Zavedeniami* (Ministry of the Radioengineering Industry: Office of Educational Establishments), *Programma* (Syllabus), for 23 different subjects in engineering technicum, Moscow, 1956.
- * MVSSO SSSR—Ministerstvo Vysshego i Srednego Spetsial'nogo Obrazovaniia SSSR (Ministry of Higher and Secondary Specialized Education of the U.S.S.R.), *Uchebnye plany po universitetskimi, ekonomicheskimi i iuridicheskimi spetsial'nostiam (dnevnoe obuchenie)* (Programs of Study for University, Economic and Jurisprudence Specialties [Day Programs]), Moscow, 1959. Referred to in the text as *Source Y*.
- Nachal'naia shkola* (Primary School) (monthly).
- * *NarKhoz-1932* (abbreviation). For full title, see TsUNKHU Gosplana SSSR, *Narodnoe khoziaistvo . . .*
- * *NarKhoz-1959* (abbreviation). For full title, see TsSU SM SSSR, *Narodnoe . . . v 1958 godu*.
- * *NarKhoz-1960* (abbreviation). For full title, see TsSU SM SSSR, *Narodnoe khoziaistvo . . . 1959*.
- * *NarKhoz RSFSR-1959* (abbreviation). For full title, see TsSU SM RSFSR, *Narodnoe . . . 1959*.
- * *NarKhoz-SBX* (abbreviation). For full title, see Gosplan SSSR, *Narodnoe khoziaistvo . . .*
- Narodnoe Prosveshchenie* (Public Education) (Monthly of Narkompros RSFSR, published in the 1920's).

* After 1959, MVSSO SSSR (Ministerstvo Vysshego i Srednego Spetsial'nogo obrazovaniia SSSR).

- **Nar Obr RR-1943* (abbreviation). For full title, see NKP RSFSR, *Narodnoe obrazovanie* . . .
- **Nar Obr RR-1944* (abbreviation). For full title, see NKP RSFSR, *Narodnoe obrazovanie* . . .
- Narodnoe obrazovanie* (Public Education) (monthly), 1946-1960.
- Narodnoe zdavookhranenie* (Public Health) (periodical).
- Nauka i zhizn'* (Science and Life) (monthly).
- Nikitin, V. P., *Puti razvitiia nauki i tekhniki v SSSR* (The Paths of Development of Science and Technology in the U.S.S.R.), Znanie series I, No. 49, Moscow, 1953.
- **NKh-1956* (abbreviation). For full title, see TsSU SM SSSR, *Narodnoe* . . .
- **NKh-1957* (abbreviation). For full title, see TsSU SM SSSR, *Narodnoe* . . .
- **NKh-RSFSR-1957* (abbreviation). For full title, see TsSU SM RSFSR, *Narodnoe* . . . 1957.
- NKP RSFSR (Narodnyi Kommissariat Prosveshcheniia RSFSR—People's Commissariat of Education of the Russian SFSR), *Kontrol'nye tsifry narodnogo obrazovaniia RSFSR na 1937 god* (Statistics on Public Education in the RSFSR for 1937), Moscow, 1937.
- **Narodnoe obrazovanie v RSFSR v 1943 godu* (Public Education in the RSFSR in 1943), Moscow, 1944. Coded in the text as *Nar Obr RR-1943*.
- **Narodnoe obrazovanie v RSFSR v 1944 godu* (Public Education in the RSFSR in 1944), Moscow, 1945. Coded in the text as *Nar Obr RR-1944*.
- , *Narodnoe prosveshchenie RSFSR: 1926-27* (Public Education in the RSFSR, 1926-27), Moscow, 1928.
- , *Narodnoe prosveshchenie RSFSR: 1927-28* (Public Education in the RSFSR, 1927-28), Moscow, 1928.
- , *Programmy srednei shkoly* (Programs of the Secondary School), Moscow, 1941.
- Nozhko, K. G., "Nekotorye voprosy planirovaniia podgotovki spetsialistov" (Certain Problems of the Planning of the Training of Specialists), *VVSh*, No. 4, April 1957, 9-19.
- O partiinnoi rabote v vuzakh* (Concerning Party Work in Higher Educational Establishments), Moscow, 1958.
- Ogorodnikov, I. T., and Shimbirev, P. N., *Pedagogika* (Pedagogy), Moscow, 1950.
- Oktiabr'* (October) (monthly).
- Osnovy-Marksizma-Leninizma: Uchebnoe posobie* (Fundamentals of Marxism-Leninism), Moscow, 1959 (textbook).
- Palladin, O. V. (ed.), *Rosvytok nauky v Ukrainii RSR za 40 rokov* (Development of Science in the Ukrainian SSR during 40 Years), Kiev, 1957.
- Panfilov, V., *Kul'turnye piatiletki, ikh analiz i kritika* (Cultural 5-Year Plans, Their Analysis and Criticism), Moscow, 1930.
- Partiinaia zhizn'* (Party Life) (periodical).
- Pchelko, A. S. and Poliak, G. B., *Arifmetik: Uchebnik dlia vtorogo klassa* (Arithmetic: Textbook for the Second Grade), Moscow, 1958.
- Pedagogicheskaiia Entsiklopediia* (Pedagogical Encyclopedia), Moscow, 1927-1929, vols. 1-3.
- Perechen' vazhneishikh nauchno-issledovatel'skikh rabot vypolniaemykh vuzami* (List of Research in Progress in Higher Educational Establishments), 2 vols., Moscow, 1958.
- Pervushin, S. A., et al., *Ekonomika tsvetnoi metallurgii SSSR* (Economics of Nonferrous Metallurgy in the U.S.S.R.), Moscow, 1956.
- Petrovskii, E. I., *Ateisticheskoe vospitanie detei v shkole i sem'e* (Atheistic Upbringing in School and Family), Znanie series, Moscow, 1955.
- , *Ekzameny v sovetskoi shkole* (Examinations in the Soviet School), Moscow, 1948.
- Petrovskii, I. G., "Higher Education in the U.S.S.R.," *Soviet News*, London, 1953.
- Pichugina, E. P., *Pravo na obrazovanie v SSSR* (The Right to Education in the U.S.S.R.), Moscow, 1957.
- Pivovarov, A. O., *Praktikum z mashynoznavstva dlia 8-klassu* (Machine-building Practice in the 8th Grade), Kiev, 1958.
- **Plan Kadrov-1930* (abbreviation). For full title, see Gosplan SSSR, *Tsentral'naia* . . ., *Plan obespecheniia* . . .
- **Plan Khoz* (abbreviation). For full title see *Planovoe khoziaistvo*.
- **Plan 1935* (abbreviation). For full title, see Gosplan SSSR, *Narodno-khoziaistvennyi* . . . 1935 god.
- **Plan 1936* (abbreviation). For full title, see Gosplan SSSR, *Narodno-khoziaistvennyi* . . . 1936 god.
- **Plan 1937* (abbreviation). For full title, see Gosplan SSSR, *Narodno-khoziaistvennyi* . . . 1937 god.
- **Plan 1941* (abbreviation). For full title, see Gosplan SSSR, *Gosudarstvennyi* . . . na 1941 god.
- **Planovoe khoziaistvo* (Planned Economy) (monthly). Coded in the text as *Plan Khoz*, with appropriate date.
- Plotnikov, K. N., *Biudzhnet sotsialisticheskogo gosudarstva* (Budget of the Socialist State), Moscow, 1948.
- Pod'iachikh, P. K., "O proekte programmy predstoiashchei v ianvare 1959 goda vsesoiuznoi perepisi naseleniia" (Concerning the Projected Program of the Forthcoming Census of Population in January 1959), *Materialy k Vsesoiuznomu soveshchaniu statistikov* (Materials for the All-Union Conference of Statisticians), Moscow, 1957.
- Poddubkov, P., *Finansirovanie proektnykh organizatsii* (Financing of Project Design Organizations), Moscow, 1954.
- **Podgotovka* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Podgotovka* . . .
- Polianskii, P. P., *Kalininskii gosudarstvennyi pedagogicheskii institut* (Kalinin State Pedagogical Institute), Kalinin, 1959.
- Politekhnikheskoe obuchenie* (Polytechnical Training) (monthly).
- Pomanskii, N. A. (comp.), *Finansirovanie prosveshcheniia i zdavookhraneniia: Sbornik postanovlenii, rasporyazhenii i instruktsii* (The Financing of Education and Health: Collection of Decrees, Regulations, and Instructions), Moscow, 1949.
- Potekhin, L., et al., *Planirovanie rashodov na sodержanie uchrezhdenii prosveshcheniia i zdavookhraneniia* (Plans for Expenditures for Maintenance of Educational and Public Health Establishments), Moscow, 1955.
- Pravda* (Truth) (newspaper).
- Pravda Ukrainy* (Ukrainian Truth) (newspaper).
- Pravda Vostoka* (Uzbekistan) (Eastern Truth [Uzbekistan]) (newspaper).
- Prepodavanie istorii v shkole* (Teaching History in Schools) (bimonthly).
- Professional'no-tekhnicheskoe obrazovanie* (Vocational-Technical Education) (monthly).
- Proizvodstvennoe obuchenie* (Industrial Education) (monthly).
- Promyshlennno-ekonomicheskaiia gazeta* (Industrial-economic Gazette) (newspaper). (Since July 1960, *Ekonomicheskaiia gazeta* [Economic Gazette]).
- Protsko, M., *Sovetskaiia intelligentsiia v bor'be za kommunizm* (The Soviet Intelligentsia in the Struggle for Communism), Moscow, 1950.
- Prudenskii, G. A., et al. (eds.), *Voprosy truda v SSSR* (Problems of Labor in the U.S.S.R.), Moscow, 1958.
- Rabochaia gazeta* (Workers' Gazette) (newspaper).
- Rashin, A. G., *Naselenie Rossii za 100 let* (Population of Russia for 100 Years), Moscow, 1956.
- Ravkin, Z. I., *Sovetskaiia shkola v period vosstanovleniia narodnogo khoziaistva, 1921-1925* (The Soviet School in the Period of Reconstruction of the National Economy, 1921-1925), Moscow, 1959.
- Riabinskii, B. Ia., *Planirovanie i ekonomika metallurgicheskikh zavodov* (Planning and Economics of Metallurgical Plants), Moscow, 1955.
- Rovinskii, N. N., *Gosudarstvennyi biudzhnet SSSR* (State Budget of the U.S.S.R.), Moscow, 1951.
- Rozental', M. M., *Velikaia oktiabr'skaia sotsialisticheskaiia revoliutsiia i formirovanie novogo cheloveka* (The Great October Socialist Revolution and the Formation of the New Man), Moscow, 1947.
- Rudnev, P., "K voprosu ob uluchshenii sistemy shkol'nogo obrazovaniia (v poriadke obsuzhdeniia)" (Concerning the Problem of Improving the System of School Education [A Discussion]), *Narodnoe obrazovanie*, No. 7, July 1958, 13-29.

- RUSANOV, E. S., "Sovnarkhozy i nekotorye voprosy ispol'zovaniia trudovykh resursov" (Regional Economic Councils and Some Problems of Utilization of Labor Resources), in *Akademiia Obshchestvennykh Nauk pri TsK KPSS, Iz opyta . . .*, Moscow, 1959.
- Russkii iazyk v shkole (The Russian Language in Schools) (bimonthly).
- Sbornik zakonodatel'nykh aktov o trude (Collection of Legislative Acts concerning Labor), Moscow, 1956.
- Sbornik zakonov SSSR i ukazov prezidiuma verkhovnogo soveta SSSR (1938 god—noiabr' 1958 goda), (Collection of Laws of the U.S.S.R. and Decrees of the Supreme Soviet of the U.S.S.R. (1938–November 1958), Moscow, 1959. Also called *Sbornik zakonov, postanovlenii i rasporyazhenii pravitel'stva SSSR* during the 1930's and early 1940's.
- *SC-Eng-1936 (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Sotsialisticheskoe* . . .
- SELINA, E. I., *Finansirovanie kul'turno-prosvetitel'nykh uchrezhdenii* (Financing of Cultural and Educational Establishments), Moscow, 1954.
- SHALIN, A. F., "Technical Education in the U.S.S.R.," *Yearbook of Education*, 1956, pp. 110–15.
- SHAMAKHOV, F. F., *Shkola Zapadnoi Sibiri v kontse XIX—nachale XX vekov* (Schools of Western Siberia at the end of 19th and beginning of the 20th Century), Tomsk, 1957.
- SHASS, M. E., *Ekonomika stroitel'noi promyshlennosti SSSR* (Economics of the Construction Industry in the U.S.S.R.), Moscow, 1958.
- SHELEPIN, A., "Uluchshat' i sovershenstvovat' komsomol'skuiu rabotu" (To Improve and Perfect the Work of the Young Communist League), *Kommunist*, No. 7 (May 1953), 82–97.
- Sheviakov, L. D., *Kak rabotat' nad dissertatsiei* (How to Prepare a Dissertation), Moscow, 1960.
- SHIMBIREV, P. N., and OGORODNIKOV, I. T., *Pedagogika* (Pedagogy), Moscow, 1954.
- *SHTYL'KO, Pod'em (abbreviation). For full title, see Shtyl'ko, A., *Pod'em* . . .
- * —, A., *Pod'em kul'turno-tekhnicheskogo urovnia trudiashchikhsia SSSR* (The Rise of the Cultural-Technical Level of Toilers in the U.S.S.R.), Moscow, 1953. Coded in the text as Shtyl'ko, *Pod'em*.
- SIMSON, T. P., *Detskaia nervnost', ee preduprezhdenie i lechenie* (Child Neurosis, Its Prevention and Cure) (VOPRPINZ lecture series), Moscow, 1949.
- *SINETSKII, A., *Professorsko-prepodavatel'skie kadry vysshei shkoly SSSR* (Professorial-Teaching Cadres of Higher Educational Establishments of the U.S.S.R.), Moscow, 1950. Coded in the text as Sinetskii, *PP Kadry*.
- * —, *PP Kadry* (abbreviation). For full title, see Sinetskii, A., *Professorsko* . . .
- SINITSYN, V. G., *Rozhdenie kommunisticheskogo byta* (The Birth of Communist Life), *Znanie* series II, No. 2, Moscow, 1960.
- SKATKIN, M. N., *O politekhnicheskoi obrazovanii v obshche-obrazovatel'noi shkole* (Concerning Polytechnical Education in Secondary Schools for General Education), *Znanie* series II, No. 30, Moscow, 1953.
- , *Politekhnicheskoe obuchenie na sovremennom etape razvitiia shkoly* (Polytechnical Education in the Present Stage of School Development), *Znanie* series II-33, Moscow, 1956, esp. pp. 4–13.
- SMIRNOV, A. A., "Les reussites scolaires et les problèmes de la psychologie," *International Review of Education*, Vol. 3, No. 3, 1957.
- SMIRNOV, V. Z., *Reforma nachal'noi i srednei shkoly v sheshtidesiatykh godakh deviatnadsatogo veka* (Reform of the Elementary and Secondary School in the 1860's), Moscow, 1954.
- SOLOGOV, V., "Kadry zheleznodorozhnogo transporta" (Cadres of Railroad Transport), in B. Levin (ed.), *Osnovnye voprosy piatiletnego plana vosstanovleniia i razvitiia zheleznodorozhnogo transporta* (Problems of Reconstruction and Development of Railroad Transport in the U.S.S.R.), Moscow, 1947.
- SONIN, M. IA., "O putiakh pod'ema kul'turno-tekhnicheskogo urovnia trudiashchikhsia" (Concerning the Improvement of the Cultural-Technical Level of Employees), in *Akademiia Nauk SSSR* (V. K. Ostrovitianinov, ed.), *Voprosy stroitel'stva kommunizma v SSSR* (Problems of Building Communism in the U.S.S.R.), Moscow, 1959.
- , *Podgotovka kvalifitsirovannykh rabochikh* (Training of Skilled Workers), Moscow, 1954.
- Sotsialisticheskii trud* (Socialist Labor) (monthly).
- Sotsialisticheskoe zemledelie* (Socialist Agriculture) (periodical).
- *Sots Stroi-1933–38 (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Sotsialisticheskoe* . . .
- *Sots Stroi-1934 (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Sotsialisticheskoe* . . .
- *Sots Stroi-1935 (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Sotsialisticheskoe* . . .
- *Sots Stroi-1936 (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Sotsialisticheskoe* . . .
- *Source X (abbreviation). Loose-leaf individual folios for *Uchebnyi plan* (Study Plan) in a particular specialty of a higher educational establishment prepared by the MVO.
- *Source Y (abbreviation). For full title, see MVSSO SSSR . . .
- *Source Z (abbreviation). For full title, see MVO SSSR, *Uchebnye plany po spetsial'nostiam . . . tekhnicheskikh . . .*
- SOVETKIN, F. F. (ed.), *Natsional'nye shkoly RSFSR za 40 let* (National Schools of the RSFSR during 40 Years), Moscow, 1958.
- Sovetskaia Belorussia* (Soviet Belorussia) (newspaper).
- Sovetskaia Estonia* (Soviet Estonia) (newspaper).
- Sovetskaia Kirgiziia* (Soviet Kirgizia) (newspaper).
- Sovetskaia kul'tura* (Soviet Culture) (monthly).
- Sovetskaia Latvia* (Soviet Latvia) (newspaper).
- Sovetskaia Litva* (Soviet Lithuania) (newspaper).
- Sovetskaia meditsyna* (Soviet Medicine) (monthly).
- Sovetskaia Moldavia* (Soviet Moldavia) (newspaper).
- Sovetskaia pedagogika* (Soviet Pedagogy) (monthly), 1937–1960.
- Sovetskii kalendar', 1917–47* (Soviet Calendar), Moscow, 1948.
- Sovetskaia Rossiia* (Soviet Russia) (newspaper).
- Sovetskoe gosudarstvo i pravo* (Soviet State and Law) (monthly).
- Sovetskoe zdoravookhranenie* (Soviet Health) (newspaper).
- Soviet Education* (monthly). Note: Although this periodical appears in English, it consists entirely of translations of articles from Soviet educational journals. It has been published in the U.S. by the International Arts and Sciences Press since 1958.
- The Soviet Union in Facts and Figures*, London: Soviet News, 1958. (Publication of the Soviet embassy in England.)
- Spravochnik dlia postupaiushchikh v aspiranturu: Aspirantura pri Moskovskikh vysshiikh uchebnykh zavedeniakh, nauchnykh i nauchno-issledovatel'skikh uchrezhdeniakh* (Handbook for Entrants to Aspirantura Training: Aspirantura in Higher Educational Establishments, Research and Scientific Establishments of Moscow), Moscow, processed for the years 1954, 1955, 1957 (probably available for other years as well.)
- Spravochnik komsomol'skogo propagandista i agitatora* (Handbook of the Komsomol Propagandist and Agitator), 2d ed., Moscow, 1957.
- Spravochnik profsoiuznogo rabotnika* (Handbook of Trade Union Workers), Moscow, 1958 (collection of major trade union decrees and ordinances).
- *Sprav SSU (abbreviation). For full title, see MVO SSSR, *Spravochnik dlia* . . .
- *Sprav VUZ—with appropriate year (abbreviation). For full title, see MVO SSSR, *Spravochnik dlia* . . .
- *Srednee spetsial'noe obrazovanie (Secondary Specialized Education) (monthly). Coded in the text as SSO, with appropriate number and date.
- *SSO (abbreviation). For full title, see *Srednee spetsial'noe . . . SSSR—kak on est'* (The U.S.S.R.—As It Is) (handbook), Moscow, 1959.
- *SSSR-Tsif-1958 (abbreviation).
- *SSSR-Tsif-1959 (abbreviation).
- *SSSR-Tsif-1960 (abbreviation). For full titles, see TsSU SM SSSR, *SSSR v tsifrakh* . . . for appropriate year.

STALIN, I., *Ekonomicheskie problemy sotsializma v SSSR* (Economic Problems of Socialism in the U.S.S.R.), Moscow, 1952.

_____, *Problems of Leninism*, Moscow, 1941.

Statisticheskoe Upravlenie (Statistical Office) of a given region or autonomous republic; *Narodnoe khoziaistvo* . . .

Abkhazskoi ASSR	Leningrad (gorod)
Adygeiskoi avtonomnoi oblasti	Leningradskoi oblasti
Adzharskoi ASSR	L'vivskoi oblasti
Altaiskogo kraia	Molotovskoi oblasti
Amurskoi oblasti	Mordovskoi ASSR
Arkhangelskoi oblasti	Moskva (gorod)
Astrakhanskoi oblasti	Moskovskoi oblasti
Belgorodskoi oblasti	Murmanskoi oblasti
Brianskoi oblasti	Novgorodskoi oblasti
Buriat-Mongol'skoi ASSR	Novosibirskoi oblasti
Chardzhouskoi oblasti	Omskoi oblasti
Checheno-Ingushskoi ASSR	Orlovskoi oblasti
Cheliabinskoi oblasti	Penzenskoi oblasti
Cherkasskoi oblasti	Primorskogo kraia
Chkalovskoi oblasti	Riazanskoi oblasti
Chuvashskoi ASSR	Samarkandskoi oblasti
Frunzenskoi oblasti	Smolenskoi oblasti
Iaroslavskoi oblasti	Stalingradskoi oblasti
Irkutskoi oblasti	Sverdlovskoi oblasti
Ivanovskoi oblasti	Tambovskoi oblasti
Kabardino-Balkarskoi ASSR	Tatarskoi ASSR
Kalininskoi oblasti	Ternopol'skoi oblasti
Kaluzhskoi oblasti	Tian'-Shan'skoi oblasti
Karel'skoi ASSR	Tiumenskoi oblasti
Khabarovskogo kraia	Tomskoi oblasti
Kirovogradskoi oblasti	Tul'skoi oblasti
Kirovskoi oblasti	Udmurtskoi ASSR
Komi ASSR	Ul'ianovskoi oblasti
Kostromskoi oblasti	Velikolukskoi oblasti
Krasnodarskogo kraia	Vinnitskoi oblasti
Krasnoarskogo kraia	Vladimirovskoi oblasti
Krymskoi oblasti	Voronezhskoi oblasti
Kuibyshevskoi oblasti	Zakarpatskoi oblasti
Kurganskoi oblasti	Zhitomirskoi oblasti
Kurskoi oblasti	

(*National Economy of . . .*) Published in the respective localities in 1957 or 1958.

STOLETOV, V., "Nekotorye voprosy raboty vysshei shkoly" (Some Problems of the Activity of Higher Educational Establishments), *Bol'shevik*, No. 23 (Dec. 1951), 23-36.

STRAKHOV, I. V., *Vospitanie vnimaniia u shkol'nikov* (Incultation of Attentive Behavior in Schoolchildren), Moscow, 1958.

Stroitel'naia gazeta (Construction Gazette) (newspaper).

STRUMILIN, S. G., *Problemy ekonomiki truda* (Problems of the Economics of Labor), Moscow, 1957.

STRUNIN, V. (comp.), *Pionerskii lager'* (Pioneer Camp), Moscow, 1947.

Svod zakonov SSSR (Collection of Laws of the U.S.S.R.), Moscow, 1934.

TADEVOSIAN, V. S., *Prava i obiazannosti roditel'ei v sovetskom gosudarstve* (Rights and Obligations of Parents in the Soviet State), Moscow, 1947.

Tekhnicheskie uchilishcha tekhnikumy Leningrada: Spravochnik dlia postupaishchikh v 1958 godu (Technical Vocational Schools and Technicums of Leningrad: Handbook for Entrants in 1958), Leningrad, 1958.

Tokarna sprava dlia serednii shkoly (Lathe-operating Practice in the Secondary School), Kiev, 1958.

TOPCHIEV, A. V., *Stroitel'stvo kommunizma i nauka* (Building of Communism and Science), Moscow, 1957.

The Trade Union of Soviet School Teachers, VOKS Information Bureau, Moscow, n.d.

**Tretii FYP* (abbreviation). For full title, see Gosplan SSSR, *Tretii piatiletnii plan* . . .

TROFIMOV, A. P., *O vospitanii shkol'nika v sem'e* (Concerning the Upbringing of Schoolchildren in the Family), *Znanie* series II, No. 4, Moscow, 1954.

TROITSKY, D. N., *Training Technicians in the Soviet Union*, Soviet News Booklet No. 6, London, 1957.

Trud (Labor) (newspaper).

**Trud-1935* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Trud* . . .

**Trud-1936* (abbreviation). For full title, see TsUNKhU Gosplana SSSR, *Trud* . . .

Tsement (Cement) (monthly).

TsSU Gosplana SSSR (Tsentral'noe Statisticheskoe Upravlenie Gosplana SSSR—Central Statistical Administration of the State Planning Commission of the U.S.S.R.), *Slovar'-spravochnik po sotsial'no-ekonomicheskoi statistike* (Dictionary-Handbook on Socioeconomic Statistics), 1st ed., Moscow, 1945, 2d ed., Moscow, 1948.

TsSU SM SSSR (Tsentral'noe Statisticheskoe Upravlenie pri Sovete Ministrov SSSR—Central Statistical Administration of the Council of Ministers of the U.S.S.R.).

*_____, *Dostizheniia sovetskoi vlasti za sorok let v tsifrakh; statisticheskii sbornik* (Accomplishments of the Soviet Regime during 40 Years, in Figures; Statistical Handbook), Moscow, 1957. Coded in the text as *Dos-1957*.

_____, *Gosudarstvennye biudzhety soiuznykh respublik v piatoi piatiletke* (State Budgets of the Union Republics in the Fifth Five Year Plan), Moscow, 1957.

*_____, *Kul'turnoe stroitel'stvo SSSR: Statisticheskii sbornik* (Cultural Construction in the U.S.S.R.) (Statistical Handbook), Moscow, 1956. Coded in the text as *KS-1956*.

*_____, *Narodnoe khoziaistvo SSSR: Statisticheskii sbornik* (The National Economy of the U.S.S.R.; Statistical Handbook), Moscow, 1956. Coded in the text as *NKh-1956*.

*_____, *Narodnoe khoziaistvo SSSR v 1956 godu; statisticheskii ezhegodnik* (National Economy of the U.S.S.R. in 1956; Statistical Handbook), Moscow, 1957. Coded in the text as *NKh-1957*.

*_____, *Narodnoe khoziaistvo SSSR v 1958 godu; statisticheskii ezhegodnik* (National Economy of the U.S.S.R. in 1958; Statistical Handbook), Moscow, 1959. Coded in the text as *NarKhoz-1959*.

*_____, *Narodnoe khoziaistvo SSSR v 1959 godu; statisticheskii ezhegodnik* (National Economy of the U.S.S.R. in 1959; Statistical Handbook), Moscow, 1960. Coded in the text as *NarKhoz-1960*.

_____, *Pechat' SSSR za sorok let* (Publishing in the U.S.S.R. during 40 years), Moscow, 1957.

_____, *Promyshlennost' SSSR* (Industry of the U.S.S.R.), Moscow, 1957.

_____, *Sel'skoe khoziaistvo SSSR: Statisticheskii sbornik* (Agriculture of the USSR: Statistical Handbook), Moscow, 1960.

*_____, *SSSR v tsifrakh v . . . godu: Kratkii statisticheskii sbornik* (The U.S.S.R. in Figures in . . . year: Brief Statistical Handbook), issued annually for the respective years 1958, 1959, and 1960, Moscow, 1959, 1960, and 1961. Coded in the text individually as *SSSR-Tsif-1958*, *SSSR-Tsif-1959*, and *SSSR-Tsif-1960*.

*_____, *Zhenshchina v SSSR* (Women in the U.S.S.R.), Moscow, 1960. Coded in the text as *Zhenshchina*.

TsSU SM of a union republic as follows:

_____, Armenian SSR, *Narodnoe khoziaistvo Armianskoi SSR* (National Economy of Armenian SSR), Erevan', 1957.

_____, Azerbaidzhan SSR, *Narodnoe khoziaistvo Azerbaidzhanskoi SSR* (National Economy of the Azerbaidzhan SSR), Baku, 1957.

_____, Belorussian SSR, *Narodnoe khoziaistvo Belorusskoi SSR* (National Economy of the Belorussian SSR), Minsk, 1957.

_____, *Dostizheniia Sovetskoi Belorussii za 40 let* (Achievements of Soviet Belorussia during 40 years), Minsk, 1958.

_____, *Narodnoe khoziaistvo Belorusskoi SSR za 40 let* (National Economy of Belorussian SSR during 40 years), Minsk, 1958.

_____, Estonian SSR, *Narodnoe khoziaistvo Estonskoi SSR* (National Economy of the Estonian SSR), Tallin, 1957.

_____, Georgian SSR, *Narodnoe khoziaistvo Gruzinskoi SSR* (National Economy of Georgian SSR), Tbilisi, 1957.

_____, Kazakh SSR, *Narodnoe khoziaistvo Kazakhskoi SSR* (National Economy of Kazakh SSR), Alma-Ata, 1957.

- Kirgiz SSR, *Narodnoe khoziaistvo Kirgizskoi SSR* (National Economy of Kirgiz SSR), Frunze, 1957.
- Latvian SSR, *Kul'turnoe stroitel'stvo Latviiskoi SSR* (Cultural Construction of the Latvian SSR), Riga, 1957.
- _____, *Narodnoe khoziaistvo Latviiskoi SSR* (National Economy of Latvian SSR), Riga, 1957.
- Lithuanian SSR, *Narodnoe khoziaistvo Litovskoi SSR* (National Economy of Lithuanian SSR), Vilnius, 1957.
- Moldavian SSR, *Narodnoe khoziaistvo Moldavskoi SSR* (National Economy of the Moldavian SSR), Kishinev, 1957.
- * _____, Russian SFSR (Tsentral'noe Statisticheskoe Upravlenie pri Sovete Ministrov RSFSR—Central Statistical Administration of the Council of Ministers of the Russian SFSR), *Kul'turnoe stroitel'stvo RSFSR* (Cultural Construction in the RSFSR), Moscow, 1958. Coded in the text as *KS-RSFSR-1958*.
- * _____, *Narodnoe khoziaistvo RSFSR* (National Economy of the RSFSR), Moscow, 1957. Coded in the text as *NKh-RSFSR-1957*.
- * _____, *Narodnoe khoziaistvo RSFSR v 1958 godu* (National Economy of the RSFSR in 1958), Moscow, 1959. Coded in the text as *NarKhov-RSFSR-1959*.
- _____, *RSFSR za sorok let* (RSFSR during 40 years), Moscow, 1957.
- _____, *Tadzhik SSR, Narodnoe khoziaistvo Tadzhikskoi SSR* (National Economy of Tadzhik SSR), Stalinabad, 1957; 1958 (2 eds.).
- _____, *Zhenshchina v Tadzhikskoi SSR* (Women in the Tadzhik SSR), Stalinabad, 1960.
- _____, *Turkmen SSR, Narodnoe khoziaistvo Turkmeniskoi SSR* (National Economy of Turkmen SSR), Ashkhabad, 1957.
- _____, *Ukrainian SSR, Dostizheniia Sovetskoi Ukrainy za sorok let* (Achievements of Soviet Ukraine during 40 years), Kiev, 1957.
- _____, *Promislovist radiatskoi Ukrainy za sorok rokov* (Industry of Soviet Ukraine during 40 years), Kiev, 1957.
- _____, *Narodnoe gosudarstvo Ukrainiskoi RSR* (National Economy of the Ukrainian SSR), Kiev, 1957.
- _____, *Zdravookhranenie v Ukrainiskoi SSR* (Public Health in the Ukrainian SSR), Kiev, 1957.
- _____, *Uzbek SSR, Narodnoe khoziaistvo Uzbekskoi SSR* (National Economy of Uzbek SSR), Tashkent, 1957.
- *TsUNKhU Gosplana SSSR (Tsentral'noe Upravlenie Narodno-Khoziaistvennogo Ucheta Gosplana SSSR—Main Administration of National Economic Statistics of the State Planning Commission of the U.S.S.R.), *Kul'turnoe stroitel'stvo SSSR 1930-1934 (statisticheskii sbornik)* (Cultural Construction in the U.S.S.R., 1930-34 [Statistical Handbook]), Moscow, 1935. Coded in the text as *Kul't Stroi-1934*.
- * _____, *Sotsialisticheskoe stroitel'stvo SSSR, 1933-38 (statisticheskii sbornik)* (Socialist Construction in the U.S.S.R., 1933-38 [Statistical Handbook]), Moscow, 1939. Coded in the text as *Sots Stroi-1933-38*.
- * _____, *Kul'turnoe stroitel'stvo SSSR v 1935 godu (statisticheskii sbornik)* (Cultural Construction in the U.S.S.R. in 1935 [Statistical Handbook]), Moscow, 1936. Coded in the text as *Kul't Stroi-1935*.
- * _____, *Kul'turnoe stroitel'stvo SSSR, 1928-38 (statisticheskii sbornik)* (Cultural Construction in the U.S.S.R., 1928-38 [Statistical Handbook]), Moscow, 1940. Coded in the text as *Kul't Stroi-1940*.
- _____, *Molodezh' SSSR* (Youth of the U.S.S.R.), Moscow, 1936.
- * _____, *Narodnoe khoziaistvo SSSR (statisticheskii spravochnik 1932)* (National Economy of the U.S.S.R. [Statistical Handbook for 1932]), Moscow, 1932. Coded in the text as *Nar Khov-1932*.
- * _____, *Podgotovka kadrov v SSSR, 1927-31* (Training of Cadres of Specialists in the U.S.S.R., 1927-31), Moscow, 1933. Coded in the text as *Podgotovka*.
- * _____, *Socialist Construction in the U.S.S.R.* (Statistical abstract), Eng. ed., Moscow, 1936. Coded in the text as *SC-Eng-1936*.
- * _____, *Sotsialisticheskoe stroitel'stvo SSSR* (Socialist Construction in the U.S.S.R.), Moscow, 1934. Coded in the text as *Sots Stroi-1934*.
- * _____, *Sotsialisticheskoe stroitel'stvo SSSR (statisticheskii ezhegodnik)* (Socialist Construction in the U.S.S.R. [Statistical Yearbook]), Moscow, 1935. Coded in the text as *Sots Stroi-1935*.
- * _____, *Sotsialisticheskoe stroitel'stvo SSSR (statisticheskii sbornik)* (Socialist Construction in the U.S.S.R. [Statistical Handbook]), Moscow, 1936. Coded in the text as *Sots Stroi-1936*.
- * _____, *Trud v SSSR* (Labor in the U.S.S.R.), Moscow, 1935. Coded in the text as *Trud-1935*.
- * _____, *Trud v SSSR*, Moscow, 1936. Coded in the text as *Trud-1936*.
- _____, *The U.S.S.R. in Figures*, Eng. ed., Moscow, 1934, esp. pp. 185-194.
- Turkmeniskaia iskra* (The Spark of Turkmenia) (newspaper).
- Uchitel'skaia gazeta* (Teachers Gazette) (newspaper).
- Ugol'* (Coal) (monthly).
- *VAN (abbreviation). For full title, see *Vestnik Akademii . . .*
- VASIUTIN, V. F., *SSSR v 1950 godu* (The U.S.S.R. in 1950), Moscow, 1947.
- VAILOV, S., *Sovetskaia nauka na novom etape* (Soviet Science in the New Stage of Development), Moscow, 1946.
- Vedomosti Verkhovnogo Soveta SSSR* (Digest of the Supreme Soviet of the U.S.S.R.) (serial).
- Verkhovnyi Sovet SSSR* (Supreme Soviet of the U.S.S.R.), *Sobranie zakonov, postanovlenii i rasporiazhenii* (Collection of Laws, Decrees and Ordinances), 1943, No. 12 (Sept. 15, 1943).
- _____, *Vneocherednaia chetvertaia sessiia* (Fourth Extraordinary Session), *Stenograficheskii otchet* (Stenographic Recording of the Proceedings), Moscow, 1939, pp. 185-186 (Aug. 28, 1939).
- VERZINA, A. K., *Nabliudeniia pogody uchashchimisia I-IV klassov* (Observation of Weather by Students in Grades 1-4), Moscow, 1958.
- VESELOV, A. N., *Nizshee professional'no-tekhnicheskoe obrazovanie v RSFSR* (Lower Vocational-Technical Education in the Russian SFSR), Moscow, 1955.
- **Vestnik Akademii Nauk SSSR* (Journal of the Academy of Sciences of the U.S.S.R.) (monthly). Coded in the text as *VAN* with appropriate no. and date.
- Vestnik elektropromyshlennosti* (Journal of the Electrical Industry) (monthly).
- Vestnik inzhenerov i tekhnikov* (Journal of Engineers and Technicians) (monthly).
- Vestnik mashinostroeniia* (Journal of the Machine-building Industry) (monthly).
- Vestnik Moskovskogo Universiteta* (Journal of Moscow University) (monthly).
- Vestnik statistiki* (Journal of Statistics) (monthly).
- **Vestnik vysshei shkoly* (Journal of Higher Education) (monthly). Coded in the text as *VVSh*, April-1940 to May 1941; and July-Aug. 1945 through 1960.
- VIGDOROVA, F., *Diary of a School Teacher*, Moscow, 1954. U. S. reprint: Vigdorova, F., *Diary of a Russian Schoolteacher*, Grove Press, New York, 1960.
- *VKVSh (Vsesoiuznyi Komitet po Delam Vysshei Shkoly pri SNK SSSR—All-Union Committee on Higher Education of the Council of Ministers of the U.S.S.R.), M. Movshovich (comp.), *Vysshaia shkola. Osnovnye postanovleniia, prikazy i instruktsii* (Higher Education. Major Decrees, Ordinances and Regulations), 1st ed., Moscow, 1945. Coded in the text as *VyShkoSPR-1945*.
- VKVTTO (Vsesoiuznaia Komissii po Vysshemu Tekhnicheskomu Obrazovaniiu—All-Union Commission on Higher Technical Education), *Vysshaia tekhnicheskai shkola* (Higher Technical Schools), Moscow, 1934.
- VLASOV, V. A., *Sovetskii gosudarstvennyi apparat* (Soviet Government Apparatus), Moscow, 1959.
- "Voprosy chlenstva VKP(b)" (Questions of the Membership of the Communist Party), *Partiinaia zhizn'* (Party Life), No. 20 (Oct. 1947), 73-83.
- Voprosy ekonomiki* (Problems of Economics) (periodical).
- Voprosy filosofii* (Problems of Philosophy) (bi-monthly).

- *VOZNESENSKII, N., *Voennaia ekonomika SSSR* (Economy of the U.S.S.R. during the War), Moscow, 1948. Coded in the text as Voznesenskii, *Voennaia*.
- * —, *Voennaia* (abbreviation). For full title, see Voznesenskii, N., *Voennaia ekonomika SSSR* . . .
- Vsesoiuznoe soveshchanie statistikov, 4-8 iunია 1957 goda (All-Union Conference of Statisticians, 4-8 June 1957), Moscow, 1958 (transcript of proceedings).
- VSNKh—Vysshii Sovet Narodnogo Khoziaistva SSSR [Supreme Economic Council of the U.S.S.R.], *Piatiletanii plan inzhenerno-tekhnicheskikh i ekonomicheskikh kadrov v promyshlennosti. Chast' pervaiia: plan potrebnosti* (Five-Year Plan for Engineering-technical and Economic Cadres in Industry. Part I: Plan of Future Demand), Moscow, 1930.
- , *Piatiletanii plan inzhenerno-tekhnicheskikh i ekonomicheskikh kadrov v promyshlennosti. Chast' vtoraiia: plan pokrytiia* (Five-Year Plan for Engineering-technical and Economic Cadres in Industry. Part II: Plan for Satisfying Demand), Moscow, 1930.
- , *Piatiletanii plan inzhenerno-tekhnicheskikh kadrov promyshlennosti* (5-Year Plan of Engineering and Technical Cadres of Industry), Moscow, 1931.
- Vsesoiuznyi Zaochnyi Politekhicheskii Institut (All-Union Extension-Correspondence Polytechnical Institute), *Kak dolzhen organizovat' uchebnuiu rabotu student* (How Study Should Be Organized by a Student), Moscow, 1958.
- *Vtoroi FYP (abbreviation). For full title, see Gosplan SSSR, *Vtoroi piatiletnii plan* . . .
- VUZ'y Leningrada: *Spravochnik dlia postupaushchikh v 1958 godu* (Higher Educational Establishments of Leningrad: Handbook for Entrants in 1958), Leningrad, 1958.
- *VVS (abbreviation). For full title, see *Vestnik vysshei shkoly*.
- *VyshkoSPR-1945 (abbreviation). For full title, see VKVSh, M. Movshovich (comp.), *Vysshaia shkola* . . .
- *VyshkoSPR-1948 (abbreviation). For full title, see MVO SSSR, M. Movshovich (comp.), *Vysshaia* . . .
- *VyshkoSPR-1957 (abbreviation). For full title, see MVO SSSR, L. I. Karpov et al (eds.), *Vysshaia shkola* . . .
- Vysoké shkoly v SSSR (sbornik stati)* (University Education in the U.S.S.R. [a collection of essays]), Prague, 1946.
- "Vysshie Tekhnicheskie Uchebnye Zavedeniia" (Higher Technical Educational Establishments), *Bol'shaia Sovetskaia Entsiklopediia*, 2d ed., Moscow, 1951, Vol. 9, pp. 512-14.
- "Vysshie Uchebnye Zavedeniia" (Higher Educational Establishments), *Bol'shaia Sovetskaia Entsiklopediia*, 2d ed., Moscow, 1951, Vol. 9, pp. 514-20.
- World Marxist Review* (monthly).
- YUDIN, P. E. (ed.), *Strany mira* (Countries of the World), Moscow, 1946, esp. pp. 166-180.
- Za promyshlennye kadry* (Industrial Cadres) (monthly).
- Zaria vostoka* (Eastern Dawn) (Georgia) (newspaper).
- Zasedaniia verkhovnogo soveta RSFSR, Stenograficheskii otchet* (April 14-16, 1959) (Sessions of the Supreme Soviet of the RSFSR, Stenographic Proceedings), Moscow, 1959.
- ZELENKO, G. I. and BLINCHEVSKII, F. L., *Sovetskoe professional'no tekhnicheskoe obrazovanie na novom etape* (Soviet Vocational-Technical Education in the New Phase), *Znanie* series II, No. 32, Moscow, 1959.
- ZENOV, M. S. (comp.), *Dokumenty i materialy po perestroike shkoly* (Documents and Materials on the School Reform), Moscow, 1960.
- Zheleznodorozhnyi transport* (Railroad Transport) (monthly).
- *Zhenshchina (abbreviation). For full title, see TsSU SM SSSR, *Zhenshchina* . . .
- *ZHIRNOV, Kul'turnoe (abbreviation). For full title, see Zhirnov, V. E., *Kul'turnoe* . . .
- *ZHIRNOV, V. E., *Kul'turnoe stroitel'stvo v poslevoennoi piatiletke* (Cultural Construction in the Postwar 5-Year Plan), Moscow, 1947. Coded in the text as Zhirnov, *Kul'turnoe*.
- , *Voprosy planirovaniia kul'turnogo stroitel'stva SSSR* (Problems of Planning of Cultural Development of the U.S.S.R.), Moscow, 1958.
- ZUBAREVA, Z. N., *Ugolok zhivoi prirody v nachal'noi shkole* (Exhibit of Live Nature in the Primary School), Moscow, 1957.
- ZVEREV, A. G. (ed.), *Finansy i sotsialisticheskoe stroitel'stvo* (Finance and Socialist Construction), Moscow, 1957, esp. chapter by V. V. Lavrov, pp. 199-236.

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